**PERMIT NO. HI S000002**

# AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. §1251 et. seq.; the "Act"); Hawaii Revised Statutes, Chapter 342D; and Hawaii Administrative Rules, Department of Health (DOH), State of Hawaii, Chapters 11-54 and 11-55;

## CITY AND COUNTY OF HONOLULU (CITY) DEPARTMENT OF ENVIRONMENTAL SERVICES (ENV)

(PERMITTEE)

is authorized to discharge storm water runoff and certain non-storm water discharges as identified in Part B.2 of this permit from the City's Municipal Separate Storm Sewer System (MS4), Municipal Building Complex, Kapolei Building Complex, and City facilities in Tables 1 and 2, and additional City facilities and storm sewer outfalls that may be identified from time to time by the Permittee,

into State Waters in and around the Island of Oahu, Hawaii,

in accordance with the general requirements, discharge monitoring requirements, and other conditions set forth herein, and in the attached DOH "Standard NPDES Permit Conditions," dated December 30, 2005, that is available on the DOH, Clean Water Branch (CWB) website at http://hawaii.gov/health/environmental/water/cleanwater/about/stdcond.html.

All references to Title 40 of the Code of Federal Regulations (CFR) are to regulations that are in effect on July 1, 2006, except as otherwise specified. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations in Title 40 of the CFR.

This permit will become effective on June 24, 2011.

This permit and the authorized discharge will expire at midnight, **September 8, 2014**.

Signed this 24th day of May, 2010.

(For) Director of Health

**FINAL PERMIT**
**May 24, 2011**

| Table 1: City Municipal Industrial facilities covered under this permit | | | |
|---|---|---|---|
| **Department** | **Div/District** | **Facility** | |
| Honolulu Police Department | | Kahuku Police Station<br>Kailua Police Station<br>Kalihi Police Station<br>Kapolei Police Station<br>Wahiawa Police Station | Waianae Police Station<br>Waipahu Training Academy |
| Honolulu Fire Department | | Central Fire Station<br>Pawaa Fire Station<br>Makiki Fire Station<br>Kuakini Fire Station<br>Kaimuki Fire Station<br>Kalihi Fire Station<br>Waikiki Fire Station<br>Mokulele Fire Station and Training Center<br>Kakaako Fire Station and Main Complex<br>Aiea Fire Station<br>Sunset Beach Fire Station<br>Waipahu Fire Station<br>Kahuku Fire Station<br>Waialua Fire Station<br>Hauula Fire Station<br>Wahiawa Fire Station<br>Kaneohe Fire Station<br>Kailua Fire Station<br>Aikahi Fire Station<br>Pearl City Fire Station<br>Kaaawa Fire Station<br>Manoa Fire Station | Wailupe Fire Station<br>Ewa Beach Fire Station<br>Nuuanu Fire Station<br>Waianae Fire Station<br>Waimanalo Fire Station<br>Nanakuli Fire Station<br>McCully Fire Station<br>Moanalua Fire Station<br>Kalihi-Kai Fire Station<br>Kalihi-Uka Fire Station<br>Palolo Fire Station<br>Hawaii-Kai Fire Station<br>Makakilo Fire Station<br>Mililani Fire Station<br>Kahaluu Fire Station<br>Waiau Fire Station<br>Olomana Fire Station<br>Kapolei Fire Station<br>Mililani-Mauka Fire Station<br>Waikele Fire Station<br>Waipahu Vehicle Maintenance Shop<br>Waterfront Fire Station<br>Aircraft One Fire Station |
| Department of Transportation Services | | Middle Street Intermodel Center<br>Pearl City Bus Facility | Kalihi-Palama Bus Facility |
| Department of Facility Maintenance | Road Division | Halawa Corp Yard<br>Pearl City Corp Yard<br>Waianae Corp Yard<br>Wahiawa Corp Yard<br>Waialua Corp Yard<br>Kapolei Corp Yard | Laie Corp Yard<br>Kaneohe Corp Yard, including Ahuimanu Dewatering Facility<br>Kailua Corp Yard<br>Sand Island Dewatering Facility |

| **Table 1: City Municipal Industrial facilities covered under this permit** | | | |
|---|---|---|---|
| **Department** | **Div/District** | **Facility** | |
| Department of Facility Maintenance | Automotive Equipment Service (AES) | Kapaa AES Corp Yard<br>Halawa AES Corp Yard | Pearl City AES Corp Yard |
| | Public Building and Electrical Maintenance (PBEM) | Kokea Corp Yard<br>Manana Corp Yard | |
| Department of Environmental Services | Collection System Maintenance (CSM) | Halawa CSM Corporation Yard | |
| | Refuse - Transfer Stations | Kapaa Refuse Transfer Station<br>Keehi Refuse Transfer Station<br>Kawailoa Refuse Transfer Station | |
| | Refuse – Collection Yards | Honolulu Refuse Collection Yard<br>Waianae Refuse Collection Yard<br>Pearl City Refuse Collection Yard<br>Wahiawa Refuse Collection Yard<br>Waialua Refuse Collection Yard<br>Laie Refuse Collection Yard<br>Kapaa Refuse Collection Yard | |
| | Refuse - Convenience Centers | Wahiawa Refuse Convenience Center<br>Laie Refuse Convenience Center<br>Waimanalo Refuse Convenience Center<br>Waipahu Refuse Convenience Center<br>Ewa Refuse Convenience Center<br>Waianae Refuse Convenience Center | |
| | Refuse – Closed Sanitary Landfills | Kapaa Closed Sanitary Landfill<br>Kalaheo Closed Sanitary Landfill<br>Waipahu Closed Sanitary Landfill<br>Kawailoa Closed Sanitary Landfill<br>Waianae Closed Sanitary Landfill | |

| Table 1: City Municipal Industrial facilities covered under this permit | | |
|---|---|---|
| **Department** | **Div/District** | **Facility** |
| Department of Environmental Services | Treatment & Disposal – Wastewater Treatment Plants (WWTP) | Sand Island WWTP<br>Honouliuli WWTP<br>Waianae WWTP<br>Wahiawa WWTP<br>Kailua WWTP |

| **Table 2: City Small MS4 facilities covered under this permit** | | | |
|---|---|---|---|
| **Department** | **Div/District** | **Facility** | |
| Department of Parks and Recreation | District I | Hanauma Bay Nature Preserve<br>Kapiolani Regional Park<br>Kaimuki Community Park<br>Kilauea District Park | Koko Head District Park<br>Manoa District Park<br>McCully District Park<br>Palolo District Park |
| | District II | Ala Moana Regional Park<br>Aiea District Park<br>Salt Lake District Park<br>Ala Puumalu Community Park<br>Booth District Park<br>Lanakila District Park | Puunui District Park<br>Kalihi Valley District Park<br>Kalakaua District Park<br>Halawa District Park<br>Makiki District Park<br>Moanalua District Park |
| | District III | Mililani District Park<br>Wahiawa District Park<br>Pearl City District Park<br>Waipahu District Park | Makakilo Community Park<br>Waianae District Park<br>Nanakuli District Park |
| | District IV | Waimanalo District Park<br>Kailua District Park<br>Kaneohe Community/Sr. Center | Kaiaka Bay Beach Park<br>Kaneohe District Park<br>Kualoa District Park |
| | District V | Central Oahu Regional Park<br>Waipio Peninsula Soccer Field | |
| | Honolulu Botanical Gardens | Foster Botanical Garden<br>Hoomaluhia Botanical Garden<br>Wahiawa Botanical Garden | |
| Department of Enterprise Service | | Neal Blaisdell Center<br>Waikiki Shell<br>Honolulu Zoo<br>Ala Wai Golf Course<br>Ewa Village Golf Course | Kahuku Golf Course<br>Pali Golf Course<br>Ted Makalena Golf Course<br>West Loch Golf Course |
| Department of Environmental Services | Treatment & Disposal | Paalaa Kai Wastewater Treatment Plants (WWTP)<br>Kaneohe Bay #4 Wastewater Pump Station (WWPS) | |

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## Part A. GENERAL REQUIREMENTS

The Permittee shall:

Part A.1. Comply with all materials submitted in and with the reapplication, dated October 31, 2008.

Part A.2. Retain a copy of this permit and all other related materials and the SWMP, with all subsequent revisions, at the ENV office.

Part A.3. Ensure that anyone working under this permit complies with the terms and conditions of this permit.

Part A.4. Include the permit number, **HI S000002**, and the following certification with all information required under this permit:

**"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."**

Part A.5. Submit all information required under this permit to the following address:

Director of Health
Clean Water Branch
Environmental Management Division
Department of Health
919 Ala Moana Boulevard, Room 301
Honolulu, Hawaii 96814-4920

## Part B. DISCHARGE LIMITATIONS

Part B.1. The Permittee shall effectively prohibit non-storm water discharges through its separate storm sewer system into State Waters and from its facilities as identified in Tables 1 and 2. National Pollutant Discharge Elimination System (NPDES) permitted discharges and non-storm water discharges identified in Part B.2 of this permit are exempt from this prohibition.

Part B.2. The following non-storm water discharges may be discharged into the Permittee's separate storm sewer system provided that the discharge be identified below, and meet all conditions when specified by the Permittee. In the event that any of the below non-storm water discharges are determined to be a source of pollutants by the Permittee, the discharge will no longer be allowed.

- ✓ Water line flushing;
- ✓ Landscape irrigation;
- ✓ Diverted stream flows;
- ✓ Rising ground waters;
- ✓ Uncontaminated ground water infiltration (as defined in 40 CFR §35.2005(20));
- ✓ Uncontaminated pumped ground water;
- ✓ Discharges from potable water sources and foundation drains;
- ✓ Air conditioning condensate;
- ✓ Irrigation water;
- ✓ Springs;
- ✓ Water from crawl space pumps and footing drains;
- ✓ Lawn watering runoff;
- ✓ Water from individual residential car washing;
- ✓ Water from charity car washes;
- ✓ Flows from riparian habitats and wetlands;
- ✓ Dechlorinated swimming pool discharges;
- ✓ Exterior building wash water (water only);
- ✓ Residual street wash water (water only), including wash water from sidewalks, plazas, and driveways, but excluding parking lots; and
- ✓ Discharges or flows from fire fighting activities.

The Permittee may also develop a list of other similar occasional incidental non-storm water discharges (e.g., non-commercial car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available to the Permittee) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the Permittee has established for allowing these

discharges to the MS4 (e.g., non-commercial car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water, etc.). The Permittee shall document in the storm water management plan any local controls or conditions placed on the discharges, and include a provision prohibiting any individual non-storm water discharge that is determined to be contributing pollutants to the MS4.

Part B.3. The discharge of pollutants from the Permittee's MS4 and Small MS4 facilities, as identified in Table 2, shall be reduced to the Maximum Extent Practicable (MEP), consistent with Section 402(p)(3)(B) of the CWA. This permit, and the provisions herein, are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants to the MEP from the City's MS4 and Small MS4 facilities to waters of the State. MEP is a dynamic performance standard and it evolves as our knowledge of urban runoff control measures increases.

Part B.4. The discharge of pollutants from the Permittee's facilities as identified in Table 1 classified as industrial facilities in accordance with 40 CFR §122.26(b)(14) (e.g., treatment works treating domestic sewage with a design flow of 1 MGD or more, convenience centers, refuse collection yards, corporation yards) shall be reduced to the appropriate discharge limitations subject to the Best Available Technology (BAT)/ Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the CWA and other respective federal and state requirements for such facilities.

## Part C. RECEIVING WATER LIMITATIONS, INSPECTIONS, AND CORRECTIVE ACTIONS

Part C.1. The discharge shall comply with the basic water quality criteria which states: "All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including:

Part C.1.a. Materials that will settle to form objectionable sludge or bottom deposits;

Part C.1.b. Floating debris, oil, grease, scum, or other floating materials;

Part C.1.c. Substances in amounts sufficient to produce taste in the water or detectable off flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in receiving waters;

Part C.1.d. High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water;

Part C.1.e. Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life; and

Part C.1.f. Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands."

Part C.2. The discharge shall not cause or contribute to a violation of any of the applicable beneficial uses or water quality objectives contained in Hawaii Administrative Rules (HAR), Chapter 11-54, titled "Water Quality Standards."

Part C.3. The Permittee shall timely visually inspect the receiving state waters, effluent, and control measures and Best Management Practices (BMPs) to detect violations of and conditions which may cause violations of the basic water quality criteria as specified in HAR, Section 11-54-4. (e.g., the Permittee shall look at effluent and receiving state waters for turbidity, color, floating oil and grease, floating debris and scum, materials that will settle, substances that will produce taste in the water or detectable off-flavor in fish, and inspect for items that may be toxic or harmful to human or other life).

Part C.4. The Permittee shall immediately take action to stop, reduce, or modify the discharge of pollutants as needed to stop or prevent a violation of the basic water quality criteria as specified in HAR, Section 11-54-4.

Part C.5. After the deadline, as identified in the Permittee's TMDL compliance schedule required in Part F.3.b., compliance with the WLAs are required. Any future WLAs adopted and approved by the EPA shall comply with their WLAs within two (2) years of the TMDL approval date.

## Part D. STORM WATER MANAGEMENT PLAN (SWMP)

The Permittee shall:

Part D.1. Further develop and improve, implement, and enforce a SWMP designed to address the requirements of this permit and reduce, to the MEP, the discharge of pollutants to and from its MS4 to protect water quality and to satisfy the appropriate water quality requirements of the Act. The SWMP shall include the following information for each of the SWMP components described in Part D.1.a to Part D.1.g below:

- The BMPs, plus underlying rationale, that shall be implemented for each of the program components.
- The measurable standards and milestones for each of the BMPs, plus underlying rationale, including interim measures to aid in determining level of effort and effectiveness of each program component.
- The name or position title and affiliation of the person or persons responsible for implementation or coordination of each program component.
- Monitoring to determine effectiveness of Wasteload Allocation (WLA) controls and of the overall storm water program.

Submittal Date. The SWMP shall be updated and modified per the requirements of this permit and be consistent with the format of this permit, and shall be submitted to DOH within one (1) year from the effective date of this permit, or as otherwise specified, and shall fully implement the SWMP upon submittal to DOH. The Permittee shall continue to implement the existing SWMP until submittal of the revision. The SWMP and any of its revisions, additions, or modifications are enforceable components of this permit.

Part D.1.a. Public Education and Outreach

The Permittee shall further develop and implement a comprehensive education and involvement program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water and illicit discharges and the steps that the public can take to reduce pollutants in storm water runoff. The program should create: changes in attitude, knowledge, and awareness; BMP implementation; pollutant load reduction; and changes in discharge and receiving water quality. The program shall target: locations of illicit discharges, decision-makers, industrial and commercial businesses,

construction operators, homeowners, university students, and school children, and the general public. The SWMP shall include a written public education plan for how the Permittee will reach all targeted audiences and implement the permit requirements described below.

Part D.1.a.(1) *Targeted Groups*. The Permittee shall address the following targeted groups in the public education plan with appropriate messages, and shall describe outreach activities and anticipated frequencies that each activity will be conducted over the permit term:

- City employees
- City consultants
- Construction industry
- Industrial facilities covered by the NPDES permit program
- Visitor industry such as hotels, condominiums, and restaurants in Waikiki
- Commercial businesses such as landscape service and maintenance (e.g., to prevent the use of leaf blowers from blowing material into the drainage structures), automobile detailing, automobile repair and maintenance, retail gasoline outlets, and restaurants
- Businesses involved in fire sprinkler testing, fire department training, and exterior building washing operations
- Any other source that the Permittee determines may contribute a significant pollutant load to its MS4

Part D.1.a.(2) *General Public*. The Permittee shall include in the public education plan the following activities, with anticipated frequencies that each activity will be conducted over the permit term:

- Public Service Announcements (PSAs)
- Adopt-A-Stream Program
- School programs
- Distribution of brochures
- Participation in special events (e.g., Earth Day events) and exhibits
- Web site
- Pesticides, herbicides, and fertilizer use program
- Water conservation
- Proper disposal of grass clippings, leaves, and other green waste
- Proper disposal of household hazardous waste

Part D.1.a.(3) *Evaluation Methods*. The Permittee shall evaluate the progress of the public education program based on the following:

- An annual survey of Oahu residents to measure both behavior and knowledge relating to storm water. The surveys can be conducted in person at events, on the phone, or using Web-based survey tools. The results of the survey shall be compared to past surveys.
- Number of brochures distributed
- Number of people trained
- Participation in events
- Volunteer hours

The results of the evaluation shall be summarized in the Annual Report.

Part D.1.b. Public Involvement/Participation

The Permittee shall include the public in developing, reviewing, and implementing the SWMP. The draft and final SWMP shall be made available to the public on the City Website and at local offices. An informational meeting shall be scheduled and announced prior to finalizing the SWMP to solicit comments and answer questions from the public. Other activities to involve the public may include providing volunteer opportunities that improve water quality, organizing a citizen advisory group to solicit ongoing input from the public about changes to the SWMP and specific SWMP-related projects, or organizing water quality-focused clean-up events to educate the public about storm water impacts.

Part D.1.c. Illicit Discharge Detection and Elimination

The Permittee shall continue to implement the ongoing program to detect and eliminate illicit connections and illegal discharges into its MS4 and shall include an updated program in the revised SWMP. The program shall include:

Part D.1.c.(1) *Improper Discharge Activities*. The Permittee shall develop and implement an improper discharge activities program to reduce to the MEP the unauthorized and illegal discharge of pollutants to its MS4.

Part D.1.c.(2) *Licenses for private drain connections*. The Permittee shall continue to require licenses for private drain connections and maintain a database of all licensed connections to its MS4.

Part D.1.c.(3) *Field Screening.* The Permittee shall continue to implement its written plan for observing major and minor outfalls to screen for improper discharges. The plan shall designate priority areas for screening, specify the frequency for screening, and identify the procedures to be followed if a discharge is observed.

Part D.1.c.(4) *Tracking.* The Permittee shall continue to maintain a database of illicit connections, illegal discharges, and spills that tracks the type of discharge, responsible party, City's response, and resolution of the discharge to the MS4.

Part D.1.c.(5) *Investigate complaints.* The Permittee shall promptly investigate observed, suspected, or reported illicit flows and pursue enforcement actions, as appropriate. Complaints made to the CWB, which discharge to the City's MS4 will be forwarded to the Permittee for their action. The Permittee shall continue to:

(i) Develop a database to identify improper discharge activity by Tax Map Key (TMK). The database shall include information about each suspected improper discharge, the Permittee's investigation of that discharge, follow-up activities, and the resolution of each discharge;

(ii) Implement a program to facilitate public reporting of illicit discharges (i.e., City's Environmental Concern Line and/or website for reporting); and

(iii) Update the "Response Plan for Investigations of Illegal Discharges," dated March 2000, to be consistent with the requirements in this permit.

Part D.1.c.(6) *Enforcement.* The Permittee shall ensure compliance with local ordinances and pursue enforcement actions against property owners with illegal drain connections and persons illegally discharging pollutants to its MS4.

Part D.1.c.(7) *Prevent and Respond to Spills to the City MS4.* The Permittee shall implement a program to prevent, respond to, contain, and clean up all wastewater and other spills that may enter into its MS4 from any source (including private laterals and failing cesspools). This program shall be included in the SWMP. Spill response teams, which may consist of local, state, and/or federal agencies, shall prevent entry of spills into the City's MS4 and contamination of surface water, ground water, and soil to the MEP.

The Permittee shall coordinate spill prevention, containment, and response activities throughout all appropriate departments, programs, and agencies to ensure maximum water quality protection at all times.

The Permittee shall continue to implement a procedure whereby DOH is notified of all wastewater spills or overflows from private laterals and failing septic systems into its MS4. The Permittee shall prevent, respond to, contain, and clean up wastewater from any such notification.

Part D.1.c.(8) *Facilitate Disposal of Used Oil and Toxic Materials.* The Permittee shall continue to implement a program(s) to facilitate the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes. Such a program shall include educational activities, public information activities, and establishment of collection sites operated by the Permittee or a private entity.

Part D.1.c.(9) *Training.* The Permittee shall provide annual training to staff on identifying and eliminating illicit connections, illegal discharges, and spills to the MS4. At a minimum, the staff trained shall include Department of Planning and Permitting and Department of Design and Construction inspectors, Department of Facility Maintenance field staff, ENV inspectors and field staff, and code compliance officers.

Part D.1.d. Construction Site Runoff Control

Permittee shall continue to implement a construction site management program to reduce to the MEP the discharge of pollutants from both private and public construction sites. The construction site management program shall include the following minimum elements:

Part D.1.d.(1) *Requirement to implement BMPs.* The Permittee shall continue to require proposed development projects to implement BMPs and standards described in:

- Rules Relating to Storm Drainage Standards
- Rules Relating to Soil Erosion Standards and Guidelines
- BMPs Manual for Construction Sites in Honolulu

These rules and guidance shall be modified as necessary. The Permittee shall notify DOH when modifications will be made.

Part D.1.d.(2) *Inventory of construction sites.* The Permittee shall continue to implement a system to track construction activity that falls within Categories 1-5. Descriptions of each category may be found in the City's "Rules Relating to Soil Erosion Standards and Guidelines (April 1999)." This system shall track information on the project (including permit or file number, if available), status of plan review and approval, inspection dates, and if applicable, enforcement actions and

whether the project has applied for coverage under HAR, Chapter 11-55, Appendix C, NPDES General Permit Authorizing the Discharge of Storm Water Associated with Construction Activity (General Construction Activity Storm Water permit) (unless the project will disturb less than one acre of land) and satisfied any other applicable requirements of the NPDES permit program (i.e., an individual NPDES permit).

Part D.1.d.(3) *Plan Review and Approval.* The Permittee shall:

(i) Review the applicable Site-Specific BMP Plan or similar document to verify that it fully meets all requirements of the City's Rules relating to Storm Drainage Standards; Rules relating to Soil Erosion Standards and Guidelines; and BMPs Manual for Construction Sites in Honolulu, as applicable, the General Construction Activity Storm Water permit, and any other requirements under the NPDES permit program, as applicable.

(ii) Review the applicable Site-Specific BMP Plan or similar document, prior to approval of local construction and grading permits, to verify that the proposed construction and grading projects will implement measures to ensure that the discharge of pollutants from the site will be reduced to the MEP and will not cause or contribute to an exceedance of water quality standards;

(iii) Ensure that, prior to issuing a grading and/or grubbing permit for any project requiring coverage under the General Construction Activity Storm Water permit and/or any other applicable requirements of the NPDES permit program, the project operator has provided proof of filing a Notice of Intent (NOI) or NPDES application for permit coverage and that a Construction BMPs Plan has been prepared; and

(iv) Not allow construction to commence on any private or public project unless and until it has verified that the project has received from DOH a General Construction Activity Storm Water permit (unless the project will disturb less than one (1) acre of land) and satisfied any other applicable requirements of the NPDES permit program (i.e., an individual NPDES permit).

The Permittee shall continue to implement a checklist that its reviewers shall use in evaluating the BMPs Plans, including for post-construction BMPs, pursuant to this paragraph and Part D.1.e. The checklist shall be updated to include identifying any deficiencies, including a section, applicable to in-field use, for the date when the corrective actions were completed. A system shall be implemented

to ensure all deficiencies, identified during the review process, has been remedied. The checklist shall be submitted within 90 calendar days from the effective date of this permit for review and acceptance. Copies of this checklist shall be provided to applicants for permits and to contractors for their use in developing construction BMPs Plans for City-contracted construction projects. For in-field use, a site map shall accompany the checklist which notes the locations of the deficiencies.

Part D.1.d.(4) *Inspections*. The Permittee shall conduct inspections in accordance with the City's guidance "Inspection and Enforcement Program for Construction Sites (January 2000)," "Rules Relating to Soil Erosion Standards and Guidelines (April 1999)" and updates accepted by DOH.

Inspections shall include a review of site Erosion and Sediment Controls, good housekeeping practices, and compliance with approved erosion control plans or construction BMPs Plans. Inspectors shall use an inspection checklist, or equivalent, and the Permittee shall track inspection results in a database or equivalent system. The checklist shall, include at a minimum, but not be limited to identifying any deficiencies and the date when the corrective actions were completed.

Part D.1.d.(5) *Enforcement*. The Permittee shall enforce its ordinances (including applicable ordinances in Chapter 14, Public Works Infrastructure Requirements) and permits (grading and other applicable permits) at all construction sites as necessary to maintain compliance with this permit. The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when an inspected project is not in full compliance with the NPDES permit, the General Construction Activity Storm Water permit, or any other applicable requirements under the NPDES permit program.

Part D.1.d.(6) *Process to refer noncompliance and non-filers to DOH.* In the event the Permittee has exhausted its use of sanctions and cannot bring a construction site or construction operator into compliance with its ordinances or this permit, or otherwise deems the site to pose an immediate and significant threat to water quality, the Permittee shall provide oral notification to DOH within one (1) week of such determination. Such oral notification shall be followed by written notification and a copy of all inspection checklists, notes, and related correspondence within two (2) weeks of the determination. In instances where an inspector identifies a site that has not applied for the General Construction Activity Storm Water permit coverage or any other applicable requirements of the NPDES permit program, the Permittee shall provide written notification to DOH within two (2) weeks of the discovery.

Part D.1.d.(7) *Training.* The Permittee shall annually train employees in targeted positions (whose jobs or activities are engaged in construction activities including plan review and construction inspection staff) regarding the requirements of the SWMP and this permit.

Part D.1.d.(8) *Education.* The Permittee shall continue to implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the storm water requirements they need to implement.

Part D.1.e. Post-Construction Storm Water Management in New Development and Redevelopment

The Permittee shall further develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that result in a land disturbance of one (1) acre or more and smaller projects that have the potential to discharge pollutants to the City MS4. The Permittee's Land Development Program must ensure that permanent controls are in place to prevent or minimize water quality impacts to the MEP, and shall include, at a minimum, the following elements:

Part D.1.e.(1) *Standards Revision.* The Permittee shall continue with its planned revisions to its standards for addressing post-construction runoff and include Low Impact Development (LID) requirements. Within six (6) months of the effective date of this permit, the Permittee shall submit to DOH for review and acceptance, a plan for requiring LID in the standards to the MEP, including revision to the BMP checklist to include LID. LID refers to storm water management practices which seek to mimic natural processes and protect water quality via infiltration, evapotranspiration or reuse of storm water runoff at the site where it was generated. The standards shall be applicable to all construction projects disturbing at least one (1) acre and smaller projects (e.g., retail gas stations, restaurants, auto repair shops, parking lots) that have the potential to discharge pollutants to the City's MS4. The plan for the implementation of LID provisions in the City's standards shall include at a minimum the following:

- Criteria for requiring implementation.
- Investigation into the development of quantitative criteria for a specific design storm to be managed by LID techniques. Examples of design storm requirements include: 24-hour, 85% storm through infiltration; on-site management of the first inch of rainfall within a 24-hour period; retention of the 100-year, 2-hour storm; or on-site management of the 24-hour, 95% storm.

- Feasibility criteria for circumstances in which a waiver could be granted for the LID requirements.
- When a LID waiver is granted, alternatives such as offsite mitigation and/or non-LID treatment control BMPs could be required.

A draft of the revised standards, shall be submitted to the DOH for review and acceptance within 12 months after the effective date of this permit and include the above (i.e., criteria for requiring implementation, feasibility criteria, alternatives when a LID waiver is granted) at a minimum, and also reflect the conclusion of the investigation of quantitative LID criteria. Within 18 months after the effective date of this permit, subject to adoption by rulemaking, the revised Standards shall be submitted to the DOH. To the extent that the revised Standards have not been adopted, the Permittee shall submit a compliance schedule for adoption, which shall not exceed 24 months after the effective date of this permit.

Part D.1.e.(2) *Review of Plans for Post-Construction BMPs*. The *Permittee* shall continue to ensure that plan reviews for new developments and redevelopments include a review for post-construction BMPs and LID requirements to ensure compliance with this part of the permit. At a minimum, this will include the review of all plans disturbing at least one (1) acre, including smaller projects (e.g., retail gas stations, restaurants, auto repair shops, parking lots) that have the potential to discharge pollutants to the City's MS4 for post-construction BMPs and LID requirements. Project documents for projects that will include installation of permanent post-construction BMPs and LID practices shall also include appropriate requirements for their future continued maintenance.

Part D.1.e.(3) *BMPs, Operation and Maintenance, and Inspection Database*. The Permittee shall further develop and implement a system to compile a database of post-construction BMPs and the frequency of maintenance and inspection of the BMPs. The database shall include both public and private activities or projects which initially discharge into the Permittee's MS4 and shall begin in the plan review stage with a database or geographic information system (GIS). Within 90 calendar days of the effective date of this permit, the Permittee shall provide the plan to map the post-construction BMPs on the GIS. In addition to the standard information collected for all projects (e.g., project name, owner, location, start/end date, etc.), the tracking system shall also include, at a minimum:

- Type and number of LID practices
- Type and number of Source Control BMPs
- Type and number of Treatment Control BMPs
- Latitude/Longitude coordinates of controls using Global Positioning

- Systems (GPS) and NAD83 Datum
- Photographs of controls
- Operation and maintenance requirements, including frequency
- Frequency of inspections

Part D.1.e.(4) *Education and Training*

(i) *Project Proponents. The Permittee shall continue to provide education and outreach material for* those parties who apply for City permits (i.e., developers, engineers, architects, consultants, construction contractors, excavators, and property owners) on the selection, design, installation, operation and maintenance of storm water BMPs, structural controls, post-construction BMPs, and LID practices. The outreach material may include a simplified flowchart for thresholds triggering permits and requirements, a list of required permits, implementing agencies, fees, overviews, timelines and a brief discussion of potential environmental impacts associated with storm water runoff.

(ii) *Inspectors*. All Permittee staff and those contractors under City contract responsible for inspecting permanent post-construction BMPs and LID practices shall receive annual training.

Part D.1.f. Pollution Prevention/Good Housekeeping

The Permittee shall further develop and implement a system maintenance program to reduce to the MEP the discharge of pollutants from all Permittee-owned facilities, roads, parking lots, municipal waste facilities, and the City MS4. The program shall include:

Part D.1.f.(1) Debris Control BMPs Program Plan

(i) *Storm Water System Inventory and Mapping*. The Permittee shall update current records and continue to develop a comprehensive inventory and map of its MS4, including structural and vegetative BMPs and Permittee-owned facilities, roads, and parking lots discharging to the City MS4.

(ii) *Street Sweeping*. The Permittee shall continue to perform frequent, regularly-scheduled street sweeping on all major streets, and in industrial, commercial and residential areas.

(iii) *Litter*. The Permittee shall continue to perform regularly scheduled roadside litter pickup and litter container servicing.

(iv) *Maintenance of Structural Controls*. The Permittee shall submit to DOH within 180 calendar days of the effective date of this permit a priority-based schedule for inspecting and maintaining structural controls, which shall include continuing to inspect debris/boulder basins and detention/retention basins on a monthly schedule and maintain/clean as necessary.

(v) *Maintenance of Storm Drainage System*. The Permittee shall submit to DOH within 180 calendar days of the effective date of this permit a priority-based schedule for inspecting and maintaining storm drain lines, manholes, and inlets/catch basins. At a minimum, all inlets/catch basins will be inspected at least once during the permit term (maintenance/cleaning may be conducted in lieu of inspections to satisfy this requirement). Inlets/catch basins requiring minimal maintenance after two (2) inspections can then be inspected on an as-needed basis.

(vi) *Action Plan for Retrofitting the Existing MS4 with Structural BMPs*. The Permittee shall:

- Continue with the implementation of the activities for Wailupe Stream, Kuliouou Stream, and Niu Stream as described on Pages 10-11 of the "Action Plan: Implementing Feasible Opportunities to Retrofit Structural BMPs," dated October 2001, and submitted to DOH on October 31, 2001, to address retrofitting the existing MS4 with structural BMPs. All structural BMPs as identified in the Action Plan, dated October 2001, shall be completed within five (5) years of the effective date of this permit.
- Evaluate the recommendations of the report titled, "Storm Water Best Management Practices (BMP) Plan for Four Major Outlets at Kaelepupu Pond," Kailua, Hawaii, November 2008.
- Evaluate the recommendations of the draft report titled, "Watershed Based Plan for Reduction of Nonpoint Source Pollution in Wailupe Stream Watershed," dated June 2010.
- Provide the DOH with an updated Action Plan within one (1) year of the effective date of this permit, which shall identify retrofits to be implemented, explanation on the basis for their selection and an implementation schedule, including addressing each of the bulleted items above. The implementation schedule shall cover a five (5) year period and be updated yearly to include additional retrofit projects with water quality protection measures for the 5$^{th}$ year of the schedule. The annual updates to the implementation schedule shall be included in the Annual Report with a description of the projects status. The Action Plan

may include, but not be limited to projects in compliance with any TMDL implementation and reduction plan.

(vii) *Trash Reduction Plan.* Within 12 months of the effective date of this permit, the permittee shall develop and submit to DOH for review and acceptance, a trash reduction plan which assesses the issue, identifies and implements control measures, and monitors these activities to reduce trash loads from the MS4. The plan shall include, at a minimum and be formatted consistent with the following:

- Quantitative estimate of the debris currently being discharged (baseline load) from the MS4, including methodology used to determine the load.
- Description of control measures currently being implemented as well as those needed to reduce debris discharges from the MS4 consistent with short-term and long-term reduction targets.
- A short-term plan and proposed compliance deadline for reducing debris discharges from the MS4 by 50% from the baseline load.
- A long-term plan and proposed compliance deadline for reducing debris discharges from the MS4 to zero.
- Geographical targets for trash reduction activities with priority on waterbodies listed as impaired for trash on the State's CWA Section 303(d) list.
- Trash reduction-related education activities as a component of Part D.1.a.
- Integration of control measures, education and monitoring to measure progress toward reducing trash discharges.
- An implementation schedule.
- Monitoring plan to aid with source identification and loading patterns as well as measuring progress in reducing the debris discharges from the MS4.
- The Annual Report shall include a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, the total trash loads and dominant types of trash removed by its actions, and the total trash loads and dominant types of trash for each type of action.

The plan shall provide for compliance with the above short-term and long-term discharge limits in the shortest practicable timeframe.

Part D.1.f.(2) Chemical Applications BMPs Program Plan

(i) *Training* - The Permittee shall develop an Authorized Use List of the chemicals the City uses and continue to implement a specific training program for all potential appliers (bulk and hand-held) of the chemicals (e.g. fertilizers, pesticides, and herbicides) in its proper application. The Permittee shall not permit the application of fertilizers, pesticides, or herbicides unless the applier has first received this training.

(ii) *Implement appropriate requirements for pesticide, herbicide, and fertilizer applications*. The Permittee shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities to its MS4. Municipal areas and activities include, at a minimum, municipal facilities, public right-of-ways, parks, recreational facilities, public golf courses, and landscaped areas.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) chemical application, as needed; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

The Permittee shall ensure that their employees or contractors or employees of contractors applying registered pesticides, herbicides, and fertilizers shall work under the direction of a certified applicator, follow the pesticide label, and comply with any other State, City, or government regulations for pesticides, herbicides, and fertilizers. All Permittee employees or contractors applying pesticides, herbicides or fertilizers shall receive training on the BMPs annually.

Part D.1.f.(3) Erosion Control BMPs Program Plan

(i) The Permittee shall continue to address erosional areas in its SWMP with the potential for significant water quality impact, but with limited public safety concerns, and are also considered a high priority for remediation. Identification of erosional areas with the potential for significant water quality impact shall include areas where there is evidence of rilling, gullying, and/or other evidence of significant sediment transport, and areas in close proximity to receiving waters listed as impaired by either sediment, siltation and/or turbidity. The Permittee shall include procedures to identify

and implement erosion control projects based on water quality concerns while continuing to address high profile public safety projects.

(ii) Require the implementation of temporary Erosion Control Measures (e.g., erosion control blankets and/or fabrics, gravel bag placement and silt fencing/fiber rolls) on erosional areas within City right-of-ways with the potential for significant water quality impact if a permanent solution is not immediately possible. Notwithstanding any other implementation provisions, the SWMP shall require the implementation of such temporary control measures on all applicable areas within one (1) year of the effective date of this permit. For projects which require a CWA Section 401 Water Quality Certification (WQC), the WQC application shall be submitted to DOH within one (1) year of the effective date of this permit and be implemented with six (6) months of the WQC or other regulatory permit(s) issuance date.

(iii) Develop a maintenance plan for vegetated portions of the drainage system used for erosion and sediment control, including controlling any excessive clearing/removal, cutting of vegetation, and application of herbicide which affects its usefulness. This plan shall be submitted to the DOH within 90 calendar days of the effective date of this permit.

(iv) The Permittee shall further develop and implement a program to prevent erosion at its storm drain system outlets. The Permittee shall install velocity dissipaters or other BMPs to reduce erosion at these locations.

Part D.1.f.(4) Municipal Facilities BMPs Program Plan

(i) *BMPs and Field Manual for municipal maintenance activities.* The Permittee shall implement the BMPs as identified in the field manual titled "Municipal Field Guide, First Edition" (Field Manual) for all municipal maintenance activities. Examples of such activities include, but are not limited to: paving and road repairs, saw cutting, concrete work, curb and gutter replacement, buried utility repairs and installation, vegetation removal, street and parking lot striping, flood channel cleaning, etc. The Field Manual shall be updated as necessary or at least once per permit term.

(ii) *Develop and Implement Storm Water Pollution Control Plan (SWPCP).* The Permittee shall develop and implement SWPCPs for municipally-owned industrial facilities identified in the inventory and not covered by a separate NPDES permit within 90 calendar days of the effective date of this permit. At a minimum, SWPCPs shall be developed and implemented for

facilities not covered by a separate NPDES permit and involved in vehicle or equipment maintenance, vehicle or equipment fueling, vehicle or equipment cleaning, chemical storage, recycling, closed landfills, refuse transfer stations, corporation yards, bus facilities, or convenience centers. The Permittee shall conduct annual site inspections at each facility with a SWPCP.

The Permittee shall ensure that appropriate BMPs are implemented for vehicle maintenance shops, vehicle storage areas, equipment cleaning operations, recycling, closed landfills, refuse transfer stations, corporation yards, bus facilities, and convenience centers designed to reduce pollutant loadings to storm water from these facilities.

(iii) *Municipal Facilities*. The Permittee shall continue regular coordination and storm water quality data sharing between the Storm Water Quality Branch, the Division of Refuse, and storm water testing results from wastewater and other facilities.

(iv) *Training*. The Permittee shall further develop and provide annual training to staff on proper municipal maintenance activities to prevent storm water pollution. The training shall cover the Field Manual developed under Part D.1.f.(4)(i) and the SWPCPs.

Part D.1.g. Industrial and Commercial Activities Discharge Management Program

The Permittee shall further develop and implement an industrial and commercial discharge management program to reduce to the MEP the discharge of pollutants from all industrial and commercial facilities and activities which initially discharge into the Permittee's MS4. At a minimum, the program shall include:

Part D.1.g.(1) *Inventory and Map of Industrial Facilities and Activities*. The Permittee shall update and submit, in electronic portable document format (pdf - minimum 300 dpi), the industrial facilities and activities inventory (industrial inventory), sorted by TMK, and map of such facilities and activities discharging, directly or indirectly, to its MS4 within the Annual Report for the fiscal year prior to the expiration year of the permit (also known as the permit renewal application). The industrial inventory update may be based on the following:

- Available information about parcel owners from the City and the State; and/or
- Collection of new information obtained during field activities or though other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits).

The industrial inventory shall include the facility name, street address, TMK, nature of business or activity, Standard Industrial Classification (SIC) code(s) that best reflect the facility product or service, principal storm water contact, receiving State water, and whether a Notice of General Permit Coverage (NGPC) under HAR, Chapter 11-55, Appendix B, NPDES General Permit Authorizing the Discharge of Storm Water Associated with Industrial Activities (General Industrial Storm Water permit) or any other applicable NPDES permit has been obtained, including a permit or file number and issuance date.

At a minimum, the industrial inventory shall include facilities and activities such as:

- Municipal Landfills (open and closed)
- Hazardous waste recovery, treatment, storage and disposal facilities
- Facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023
- Facilities subject to General Industrial Storm Water permit coverage or any other applicable NPDES permit coverage
- And any other industrial facility that either the Permittee or DOH determines is contributing a substantial pollutant loading to the City MS4.

Part D.1.g.(2) *Inventory and Map of Commercial Facilities and Activities*. The Permittee shall update and submit, in pdf format (minimum 300 dpi), the commercial facilities and activities inventory (commercial inventory), sorted by priority areas, and map of such facilities and activities discharging, directly or indirectly, to its MS4 within the permit renewal application. The commercial inventory update may be based on the following:

- Available information about parcel owners from the City and the State; and/or
- Collection of new information obtained during field activities or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits).

The commercial inventory shall include, by priority area, the facility name, street address, TMK, nature of business or activity, SIC code(s) that best reflect the facility product(s) or service(s), principal storm water contact, and receiving State water.

At a minimum, the commercial inventory shall include facilities and activities such as:

- Retail Gasoline Outlets
- Retail Automotive Services, including Repair Facilities
- Restaurants
- Any other commercial facility that either the Permittee or DOH determines is contributing pollutants to the City MS4 that may cause or contribute to an exceedance of State water quality standards

Part D.1.g.(3) *Prioritized Areas for Industrial and Commercial Facility and Activity Inspections.* The Permittee shall implement the plan, which designates priority areas for industrial and commercial facility and activity inspections. The prioritized area plan shall take into account the number of industrial and commercial facilities in the area, the density of these facilities, previous storm water violations in the area, and water quality impairments in the area. The plan shall identify priority areas and set a schedule for inspections within each area over the duration of this permit. The prioritized area plan shall be submitted to DOH within one (1) year of the effective date of this permit.

Part D.1.g.(4) *Inspection of Industrial and Commercial Facilities and Activities*

The industrial/commercial inspection program shall continue to be implemented and updated as appropriate to reflect the outcomes of the investigations discussed in the following paragraphs.

The Permittee shall ensure that at a minimum 400 industrial and commercial facilities and activities identified in the industrial and commercial inventories required under Parts D.1.g.(1) and D.1.g.(2) are inspected annually. Inspectors shall determine compliance with local ordinances and the terms of this permit. If DOH inspects a facility for compliance with the General Industrial Storm Water permit coverage or any other applicable NPDES permit, then the Permittee does not need to inspect the facility that year.

All industrial facilities within a priority area shall be inspected in accordance with the applicable portions of the "NPDES Compliance Inspection Manual" (EPA 305-X-04-001), dated July 2004. The Permittee shall submit semi-annual inspection report(s) to the DOH by October 31$^{st}$ and April 30$^{th}$ for inspections done within the previous period. The Permittee shall also inspect commercial facilities in the priority area to ensure compliance with local ordinances and the terms of this permit.

Inspections must consist of a review of implementation of BMPs for compliance with local ordinances and this permit to assess potential impacts to receiving waters. Inspections shall also assess potential sources of pollutants to the City MS4 and require controls to prevent discharge of pollutants to the City MS4.

Inspectors shall be trained to identify deficiencies, assess potential impacts to receiving waters, and evaluate the appropriateness and effectiveness of deployed BMPs and SWPCPs, if applicable.

The inspectors shall use an inspection checklist, or equivalent, and photographs to document site conditions and BMPs conditions.

Records of all inspections shall be maintained for a minimum of five (5) years, or as otherwise indicated.

Part D.1.g.(5) *Enforcement Policy for Industrial Facilities and Activities*. The Permittee shall continue to implement its enforcement policy for industrial or commercial facilities which have failed to comply with local ordinances and/or terms of this permit. The policy shall be part of the overall escalating enforcement policy and must consist of the following:

- Issuance of written documentation to a facility representative within two (2) weeks of storm water deficiencies identified during inspection. Documentation must include copies of all field notes, correspondence, photographs, and sampling results if applicable.
- A timeline for correction of the deficiencies.
- Provisions for re-inspection and potential enforcement actions, if necessary.

In the event the Permittee has exhausted all available sanctions and cannot bring a facility or activity into compliance with local ordinances and this permit, or otherwise deems the facility or activity an immediate and significant threat to water quality, the Permittee shall provide email notification to DOH within one (1) week of such determination. Email notification shall be followed by an electronic copy on CD/DVD in pdf format (300 minimum dpi) of all inspection checklists, notes, photographs, and related correspondence within two (2) weeks of the determination. In instances where an inspector identifies a facility that has not applied for the General Industrial Storm Water permit coverage or any other applicable NPDES permit, the Permittee shall provide email notification to DOH within one (1) week of such determination.

Part D.1.g.(6) *Training*. The Permittee shall continue to provide annual training to staff on how to conduct industrial and commercial inspections, the types of facilities covered by the General Industrial Storm Water permit coverage or any other applicable NPDES permit, elements in an SWPCP for industrial facilities, BMPs and source control measures for industrial and commercial facilities, and inspection and enforcement techniques. Any updates to the 2006 Training shall be submitted to DOH for review and acceptance within 90 calendar days of the change.

Part D.2. Revise the SWMP, as necessary, if any discharge limitation or water quality standard established in HAR, Section 11-54-4 is exceeded. The revisions shall include BMPs and/or other measures to reduce the amount of pollutants found to be in exceedance from entering State Waters.

Part D.3. Properly address all modifications, concerns, requests, and/or comments to the satisfaction of the DOH.

Part D.3.a. SWMP Modifications. The storm water pollution control activities described in the SWMP may need to be modified, revised, or amended from time to time over the life of the permit to respond to changed conditions and to incorporate more effective approaches to pollutant control. Minor changes may be proposed by the Permittee or requested by the DOH. Proposed changes that imply a major reduction in the overall scope and/or level of effort of the SWMP must be made for cause and in compliance with 40 CFR §122.62 and Part 124. A written report shall be submitted to the Director of Health (Director) for acceptance at least 30 calendar days prior to the initiation date of the major modification. The Permittee shall report and justify all other modifications made to the SWMP in the annual report for the year in which the modification was made.

Part D.3.b. System Modifications include any planned physical alterations or additions to the permitted separate storm sewer system and any existing outfalls newly identified over the term of the permit. All alterations and/or additions to the City MS4 shall be indicated in the Annual Report. Major alterations and/or additions shall be identified by letter within 30 calendar days of the completion of the alteration and/or addition.

## Part E. CITY MUNICIPAL INDUSTRIAL AND SMALL MS4 FACILITIES

Part E.1. City Municipal Industrial and Small MS4 facilities covered under this permit shall comply with the requirements in HAR, Chapter 11-55, Appendix B and Appendix K, respectively.

Part E.2. The Permittee shall submit within 90 calendar days from the effective date of this permit for review and acceptance, the CWB NOI General Form, CWB NOI Form B and SWPCP for each Municipal Industrial facility listed in Table 1 and, CWB NOI General Form, CWB NOI Form K and SWMP for each Small MS4 facility listed in Table 2, which has not yet been submitted. Upon acceptance of the information, the DOH will acknowledge by letter, the inclusion of the facility into this permit. The SWPCPs and SWMPs must be implemented upon the effective date of this permit.

Part E.3. The Permittee may add new or currently existing Municipal Industrial and/or new Small MS4 facilities into this permit by request in writing to the DOH. Along with a written request, the Permittee shall submit the applicable NOI Forms, SWPCP or SWMP, as applicable, and other attachments to the DOH for review and comment. Upon acceptance of the information, the DOH will acknowledge by letter, the inclusion of the facility into this permit. The SWPCP or SWMP must be implemented upon the start-up of the facility or for an existing municipal industrial facility, the SWPCP must be implemented upon submittal of the written request.

Part E.4. For the submittal of facility information, please check the CWB website at http://hawaii.gov/health/environmental/water/cleanwater/index.html or contact the CWB for the current submittal instructions.

## Part F. MONITORING REQUIREMENTS

Part F.1. Annual Monitoring Plan

Part F.1.a. The Permittee shall submit the Annual Monitoring Plan to the Director by June 1st of each year for review and acceptance. The Annual Monitoring Plan shall be implemented over the coming fiscal year.

The monitoring program must be designed and implemented to meet the following objectives:

Part F.1.a.(1) Assess compliance with this permit (including TMDL I&M Plans and compliance with Wasteload Allocations);

Part F.1.a.(2) Measure the effectiveness of the Permittee's storm water management plan;

Part F.1.a.(3) Assess the overall health based on the chemical, physical, and biological impacts to receiving waters resulting from storm water discharges and an evaluation of the long term trends;

Part F.1.a.(4) Characterize storm water discharges;

Part F.1.a.(5) Identify sources of specific pollutants;

Part F.1.a.(6) Detect and eliminate illicit discharges and illegal connections to the MS4; and

Part F.1.a.(7) Assess the water quality issues in each watershed resulting from storm water discharges.

Part F.1.b. The plan shall, at a minimum, include the following items:

Part F.1.b.(1) Written narrative of the proposed monitoring plan's objectives, including but not limited to the objectives as identified in Part F.1.a., and description of activities;

Part F.1.b.(2) For each activity, a description of how the results will be used to determine compliance with this permit.

Part F.1.b.(3) Identification of management measures proven to be effective and/or ineffective at reducing pollutants and flow.

Part F.1.b.(4) Written documentation of the following:

(i) Characteristics (timing, duration, intensity, total rainfall) of the storm event(s);

(ii) Parameters for measured pollutant loads; and

(iii) Range of discharge volumes to be monitored, as well as the timing, frequency, and duration at which they are identified;

Part F.1.b.(5) Written documentation of the analytical methods to be used;

Part F.1.b.(6) Written documentation of the Quality Assurance/Quality Control procedures to be used; and

Part F.1.b.(7) Estimated budget to be implemented over the coming fiscal year.

Part F.2. Storm Water Associated with Industrial Activities

The Permittee shall develop a priority based monitoring schedule for each type of Industrial Facility (i.e., convenience center, refuse collection yard, corporation yard, etc.) with the highest priority for facilities with the greatest potential of pollutant discharge. The facilities ranked first within each type shall be annually monitored as other facilities (based on priority), within the same type, are monitored on a rotational basis (i.e., at least two (2) facilities monitored per year per type). Facilities which exceed any of the limitations are required to be monitored during the next year, in addition to the next priority facility. For facilities required to be re-sampled because of a previous exceedance or by request to the Director (on a case by case basis) for facilities which are required to be annually monitored (e.g., wastewater treatment plants), the Permittee may have the option of implementing/installing structural BMP(s) during that year in lieu of sampling. The BMP(s) shall be selected based on targeting the pollutant(s) which were exceeded. The total cost of the BMP implementation shall not be less than the cost of the sampling. Sampling shall continue for the year after which BMPs were installed to measure the effectiveness of the BMPs. The Permittee will not be granted consecutive year BMP implementation in lieu of sampling. The Permittee shall monitor for the parameters as specified below, including any additional parameters, which the Permittee believes to be present in the storm water runoff and the results reported on the Discharge Monitoring Report (DMR) Form.

| Effluent Parameter (units) | Effluent Limitation {1} | Type of Sample{2} |
|---|---|---|
| Flow (gallons) | {4} | Calculated or Estimated |
| Biochemical Oxygen Demand (5-Day) (mg/l) | {4} | Composite {3} |
| Chemical Oxygen Demand (mg/l) | {4} | Composite {3} |
| Total Suspended Solids (mg/l) | {4} | Composite {3} |
| Total Phosphorus (mg/l) | {4} | Composite {3} |
| Total Nitrogen (mg/l) {5} | {4} | Composite {3} |
| Nitrate + Nitrite Nitrogen (mg/l) | {4} | Composite {3} |
| Oil and Grease (mg/l) | 15 | Grab {6} |
| pH Range (Standard Units) | {9}<br>5.5-8.0 {10}<br>7.6-8.6 {11} | Grab {7} |
| Ammonia Nitrogen (mg/l) | {4} | Composite |
| Turbidity(0.1 NTU) | {4} | Grab |
| Dissolved Oxygen (0.1 mg/l) | {4} | Grab |
| Oxygen Saturation (1%) | {4} | Grab |
| Temperature (0.1 °C) | {4} | Grab |
| Salinity (0.1 ppt) | {4} | Grab |

Annual monitoring shall continue to be required at the wastewater treatment plants and closed sanitary landfills. Additional monitoring requirements for those Industrial Facilities are indicated below:

**Wastewater Treatment Plants**

| Effluent Parameter (units) | Effluent Limitation {1} | Type of Sample{2} |
|---|---|---|
| Copper (µg/l) {8} | 6.0 {12}<br>2.9 {13} | Composite {3} |
| Zinc (µg/l) {8} | 22 {12}<br>95 {13} | Composite {3} |

**Refuse –Closed Landfills**

| Effluent Parameter (units) | Effluent Limitation {1} | Type of Sample{2} |
|---|---|---|
| Iron (µg/l) {8} | 1,000 | Composite {3} |

mg/l = milligrams per liter = 1000 micrograms per liter (µg/l)

NOTES:

{1} Pollutant concentration levels shall not exceed the storm water discharge limits or be outside the ranges indicated in the table. Actual or measured levels which exceed those storm water discharge limits or are outside those ranges shall be reported to the CWB required in HAR, Chapter 11-55, Appendix B, Section 10(c).

{2} The Permittee shall collect samples for analysis from a discharge resulting from a representative storm. A representative storm means a rainfall that accumulates more than 0.1 inch of rain and occurs at least 72 hours after the previous measurable (greater than 0.1 inch) rainfall event.

"Grab sample" means a sample collected during the first 15 minutes of the discharge.

"Composite sample" means a combination of at least two (2) sample aliquots, collected at periodic intervals. The composite shall be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to the total flow of storm water discharge flow since the collection of the previous aliquot. The Permittee may collect aliquots manually or automatically.

Samples for analysis shall be collected during the first 15 minutes of the discharge and at 15-minute intervals thereafter for the duration of the discharge, as applicable. If the discharge lasts for over an hour, sample collection may cease.

{3} If the duration of the discharge event is less than 30 minutes, the sample collected during the first 15 minutes of the discharge shall be analyzed as a grab sample and reported toward the fulfillment of this composite sample specification. If the duration of the discharge event is greater than 30 minutes, the Permittee shall analyze two (2) or more sample aliquots as a composite sample.

{4} No limitation at this time. Only monitoring and reporting is required.

{5} The Total Nitrogen parameter is a measure of all nitrogen compounds in the sample (nitrate, nitrite, ammonia, dissolved organic nitrogen, and organic matter present as particulates).

{6} The Permittee shall measure Oil and Grease using EPA Method 1664, Revision A.

{7} The Permittee shall measure pH within 15 minutes of obtaining the grab sample.

{8} The Permittee shall test for the total recoverable portion of all metals. If monitoring results indicate that the discharge limitation was equaled or exceeded, the SWPCP shall be amended to include additional BMPs targeted to reduce the parameter which was in excess of the discharge limitation.

{9} There is no discharge limitation at this time for discharges into Nuupia Pond and Kawainui Marsh. The Permittee shall report only.

{10} This limitation applies to discharge into state waters classified as inland streams.

{11} This limitation applies to discharge into state waters classified as marine open coastal waters.

{12} This limitation applies to discharge into freshwater.

{13} This limitation applies to discharge into saltwater.

Part F.3. WLA Implementation for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, Kaneohe Stream, and the North and South Forks of Kaukonahua Stream.

Part F.3.a. The Permittee shall submit to DOH implementation and monitoring plans for the Kaneohe Stream and the North and South Forks of Kaukonahua Stream WLAs; and updated plans for the existing Ala Wai Canal, Kawa Stream, Waimanalo Stream, and Kapaa Stream WLAs. The implementation and monitoring plans shall be made available on the Permittee's website for public review and comment. For TMDLs, which include WLAs for the State of Hawaii, Department of Transportation (DOT-HWYs), the plan shall be developed jointly [i.e., only one (1) plan per TMDL watershed] with activities to be implemented by the City and DOT-HWYs concurrently with the purpose of maximizing the effectiveness of the activities. The plans shall be submitted within one (1) year of the effective date of the later, City or DOT-HWYs permit. The plans shall include at a minimum the following:

Part F.3.a.(1) Detailed information on the activities proposed to be implemented.

Part F.3.a.(2) Actual or literature documentation of the estimated effectiveness of the activities targeted to reduce the pollutants of concern such as total nitrogen, total phosphorus, Total Suspended Solids, and turbidity in the Watershed, as applicable, to comply with the WLAs.

Part F.3.a.(3) A detailed and quantitative analysis which demonstrates that the proposed activities would ensure consistency with the WLAs.

Part F.3.a.(4) Information from pre and post monitoring activities to quantitatively demonstrate consistency with the WLAs.

Part F.3.a.(5) A monitoring plan which shall identify representative outfalls within its respective watershed to be monitored, rationale for selecting those outfalls, and description of the water quality monitoring activities to demonstrate consistency with the WLAs.

Part F.3.b. The Permittee shall submit a compliance schedule with a final compliance deadline to comply with the TMDL waste load allocations only, as specified in the following within one (1) year of the effective date of this permit. The compliance schedule shall provide for the implementation of the BMPs, monitoring to evaluate its performance, and time to make adjustments necessary to demonstrate consistency with the WLAs at the earliest possible time. If the schedule extends beyond a year, interim dates and milestones shall be included in the schedule with the time between interim dates not to exceed one year. After the deadline, compliance with the WLAs are required.

Part F.3.b.(1) The Permittee and DOT-HWYs shall work together and comply with the joint WLAs as specified in the following: *Revisions to Total Maximum Daily Loads for the Ala Wai Canal, Island of Oahu, Hawaii* Report (dated June 2002), Table 8: TMDLS, Wasteload Allocations, and Load Allocations for Ala Wai Canal Watershed (Pages 25-26) at http://hawaii.gov/health/about/admin/health/environmental/env-planning/wqm/awtmdlfinal.pdf.

Table 8: TMDLs, Wasteload Allocations, and Load Allocations for Ala Wai Canal Watershed

| Source/Allocation | Est. Load (kg/day) | % total load | Allocations (kg/day) | % reduction needed |
|---|---|---|---|---|
| **Total Nitrogen** | | | | |
| Non-urban source load allocation | 30 | 38-51% | 13 | 55% |
| Urban source wasteload allocation: City and County of Honolulu Department of Transportation | 6-26 | 10-33% | 6 | ~65% |
| Groundwater/Baseflow load allocation | 4 | 5-7% | 2 | 50% |
| Cesspools load allocation | 19 | 24-32% | 1 | 95% |
| Hawaii Marine Ltd. WLA | | | note 1 | |
| Yacht Harbor Towers WLA | | | note 1 | |
| Unallocated 10% reserve | | | 3 | |
| **Total/TMDL** | **69.4** | **100%** | **25.4** | |

Table 8 continued

| Source/Allocation | Est. Load (kg/day) | % total load | Allocations (kg/day) | % reduction needed |
|---|---|---|---|---|
| **Total Phosphorus** | | | | |
| Non-urban lands load allocation | 8 | 38-48% | 4 | 50% |
| Urban source wasteload allocation: City and County of Honolulu Department of Transportation | 6-10 | 35-48% | 4 | ~50% |
| Groundwater/baseflow load allocation | 2 | 5-6% | 1 | 50% |
| Cesspools load allocation | 1 | 5-6% | 0 | >95% |
| Super Hawaii Marine WLA | | | note 2 | |
| Yacht Harbor Towers WLA | | | note 2 | |
| Unallocated reserve | | | 1 | |
| **Total/TMDL** | **21-25** | **100%** | **10** | |

All figures have been rounded to the closest whole number in response to a comment concerning the lack of precision in the analytical methods used for the TMDLs.

Note 1: WLA = 150 ug/l total nitrogen

Note 2: WLA = 20 ug/l total phosphorus

Source: Analysis of Freeman, 1993 and CCH, 1999

Part F.3.b.(2) *Allocations of Total Maximum Daily Loads of Total Suspended Solids, Nitrogen and Phosphorus for Kawa Stream, Kaneohe, Hawaii* Report (dated June 2005), Table 10.1 Kawa Stream TMDL Allocations (Page 11) at http://hawaii.gov/health/about/admin/health/environmental/env-planning/wqm/wqm/kawawlarev.pdf.

Table 10.1. Kawa Stream TMDL Allocations

| | |
|---|---|
| CCH Environmental Services | = Park + Residential + Commercial + CCH Streets |
| CCH Parks & Recreation | = Kaneohe Community and Senior Center (Park) |
| DOT Highways | = Highways, DOT |
| DOE schools | = Schools (Public) |
| DOD cemetery | = Veterans Cemetery |
| Nonpoint sources | = Forest + Cemetery (private) + Golf |

| DRY SEASON BASE FLOW | TMDL (kg) | | | TMDL (kg/day) | | |
|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP |
| LA to CCH Environmental Services Large MS4 | 230 | 4 | 1 | 1.25 | 0.02 | 0.00 |
| LA to CCH Parks & Recreation Small MS4 | 2 | 0 | 0 | 0.01 | 0.00 | 0.00 |
| LA to DOT Highways Large MS4 | 4 | 0 | 0 | 0.02 | 0.00 | 0.00 |
| LA to DOE Small MS4 | 14 | 0 | 0 | 0.07 | 0.00 | 0.00 |
| LA to DOD Small MS4 | 124 | 5 | 1 | 0.67 | 0.03 | 0.00 |
| LA to other nonpoint sources | 2,427 | 43 | 7 | 13.19 | 0.23 | 0.04 |
| Totals | 2,800 | 52 | 8 | 15.22 | 0.28 | 0.05 |

| WET SEASON BASE FLOW | TMDL (kg) | | | TMDL (kg/day) | | |
|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP |
| LA to CCH Environmental Services Large MS4 | 1,477 | 17 | 4 | 8.16 | 0.09 | 0.02 |
| LA to CCH Parks & Recreation Small MS4 | 7 | 0 | 0 | 0.04 | 0.00 | 0.00 |
| LA to DOT Highways Large MS4 | 24 | 0 | 0 | 0.13 | 0.00 | 0.00 |
| LA to DOE Small MS4 | 113 | 3 | 1 | 0.63 | 0.01 | 0.00 |
| LA to DOD Small MS4 | 369 | 10 | 1 | 2.04 | 0.06 | 0.01 |
| LA to other nonpoint sources | 6,210 | 77 | 15 | 34.31 | 0.43 | 0.08 |
| Totals | 8,201 | 108 | 21 | 45.31 | 0.60 | 0.12 |

| ANNUAL STORM RUNOFF | TMDL (kg) | | | TMDL (kg/day) | | |
|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP |
| WLA to CCH Environmental Services Large MS4 | 11,995 | 178 | 62 | 32.86 | 0.49 | 0.17 |
| WLA to CCH Parks & Recreation Small MS4 | 15 | 0 | 0 | 0.04 | 0.00 | 0.00 |
| WLA to DOT Highways Large MS4 | 2,035 | 17 | 4 | 5.57 | 0.05 | 0.01 |
| WLA to DOE Small MS4 | 971 | 16 | 6 | 2.66 | 0.04 | 0.02 |
| WLA to DOD Small MS4 | 172 | 4 | 2 | 0.47 | 0.01 | 0.01 |
| LA to nonpoint sources | 790 | 20 | 7 | 2.17 | 0.05 | 0.02 |
| Totals | 15,978 | 234 | 82 | 43.77 | 0.64 | 0.22 |

Note for Table 10.1: TMDL allocations in kg/day are obtained by dividing dry season kg by 184 days, wet season kg by 181days and annual storm runoff kg by 365 days.

Part F.3.b.(3) *Total Maximum Daily Loads for Total Suspended Solids, Nitrogen, and Phosphorus in Kapa`a Stream, Kailua, Hawaii* Report (dated May 2007), Table 6.10 - Consolidated Dry Season TMDL Allocations to Existing Sources (Pages 6-12) and Table 6.11 - Consolidated Wet Season TMDL Allocations to Existing Sources and Load Reductions Required to Achieve Kapaa Stream TMDLs (Pages 6-13) at http://hawaii.gov/health/environmental/env-planning/wqm/2007_finalkapaastreamreport.pdf .

*Table 6.10.* Consolidated Dry Season TMDL Allocations to Existing Sources*
and
Load Reductions Required to Achieve Kapaa Stream TMDLs

| | TMDLs | | | Existing | | | Reductions Required | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dry Season Baseflow | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| LAs to facility areas | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (%) | (kgd) | (%) | (kgd) | (%) |
| CCH MS4 | 5 | 0.0 | 0.0 | 5 | 0.1 | 0.0 | 1 | 11 | 0.1 | 83 | 0.0 | 85 |
| CCH Kalaheo Landfill | 19 | 0.1 | 0.0 | 24 | 0.5 | 0.2 | 5 | 20 | 0.5 | 85 | 0.2 | 87 |
| CCH Kapaa Landfill | 27 | 0.1 | 0.0 | 36 | 0.9 | 0.3 | 9 | 25 | 0.8 | 89 | 0.3 | 91 |
| CCH Waste Transfer | 1 | 0.0 | 0.0 | 23 | 0.3 | 0.1 | 22 | 95 | 0.3 | 94 | 0.1 | 96 |
| HI DOT Highways MS4 | 4 | 0.0 | 0.0 | 4 | 0.1 | 0.0 | 0 | 4 | 0.1 | 79 | 0.0 | 81 |
| Ameron Quarry | 62 | 0.2 | 0.1 | 69 | 1.4 | 0.3 | 7 | 10 | 1.2 | 85 | 0.2 | 31 |
| Industrial Park | 22 | 0.1 | 0.0 | 28 | 0.4 | 0.1 | 5 | 19 | 0.3 | 85 | 0.1 | 87 |
| LA to other source areas | 40 | 0.3 | 0.1 | 41 | 1.0 | 0.4 | 1 | 2 | 0.7 | 70 | 0.3 | 71 |
| Totals | 180 | 0.8 | 0.2 | 229 | 4.6 | 1.4 | 49 | 21 | 3.9 | 83 | 1.2 | 83 |

| | TMDLs | | | Existing | | | Reductions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dry Season 10% Runoff | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| WLAs | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kg) | (%) |
| CCH MS4 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 13 | 0.0 | 10 | 0.0 | 13 |
| CCH Kalaheo Landfill | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| CCH Kapaa Landfill | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| CCH Waste Transfer | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| HIDOT Highways MS4 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 5 | 0.0 | 4 | 0.0 | 6 |
| Ameron Quarry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Industrial Park | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| LA to Nonpoint sources | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Totals | 0.3 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 7 | 0.0 | 5 | 0.0 | 7.2 |

| | TMDLs | | | Existing | | | Reductions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dry Season 2% Runoff | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| WLAs | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kg) | (%) |
| CCH MS4 | 61 | 0.2 | 0.1 | 384 | 0.7 | 0.5 | 323 | 84 | 0.5 | 68 | 0.4 | 90 |
| CCH Kalaheo Landfill | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| CCH Kapaa Landfill | 80 | 0.8 | 0.1 | 3586 | 4.9 | 1.3 | 3506 | 98 | 4.0 | 83 | 1.2 | 92 |
| CCH Waste Transfer | 3 | 0.1 | 0.0 | 49 | 0.3 | 0.1 | 46 | 95 | 0.2 | 71 | 0.1 | 85 |
| HIDOT Highways MS4 | 49 | 0.5 | 0.2 | 68 | 0.7 | 0.7 | 19 | 28 | 0.2 | 22 | 0.5 | 76 |
| Ameron Quarry | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Industrial Park | 133 | 0.6 | 0.1 | 272 | 1.7 | 0.3 | 139 | 51 | 1.1 | 63 | 0.3 | 92 |
| LA to Nonpoint sources | 434 | 2.2 | 0.3 | 8545 | 5.0 | 3.5 | 8111 | 95 | 2.9 | 57 | 3.2 | 91 |
| Totals | 760 | 4.5 | 0.7 | 12904 | 13.3 | 6.3 | 12144 | 94 | 8.8 | 66 | 5.7 | 89 |

*TMDL allocations in kgd (kilograms per day) are obtained by dividing dry season total kg by 184 days.
Loads and Load Reductions are rounded to the nearest 0.1 kg, thus (a) **Totals** may be different than the sum of their parts and (b) **TMDLs, Existing Loads and Reductions Required** may actually be greater than 0.

Acronyms
TMDLs = Total Maximum Daily Loads
LAs = Load Allocations
WLAs = Waste Load Allocations
kgd = kilograms per day
TSS = Total Suspended Solids
TN = Total Nitrogen
TP = Total Phosphorous
CCH = City and County of Honolulu
MS4 = Municipal Separate Storm Sewer System
HIDOT = State of Hawaii Department of Transportation
kg = kilograms

*Table 6.11.* Consolidated Wet Season TMDL Allocations to Existing Sources and Load Reductions Required to Achieve Kapaa Stream TMDLs

| | TMDLs | | | Existing | | | Reductions Required | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wet Season Baseflow** | **TSS** | **TN** | **TP** | **TSS** | **TN** | **TP** | **TSS** | | **TN** | | **TP** | |
| **LAs to facility areas** | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (%) | (kgd) | (%) | (kgd) | (%) |
| CCH MS4 | 7 | 0.0 | 0.0 | 7 | 0.1 | 0.0 | 0 | 0 | 0.1 | 81 | 0.0 | 82 |
| CCH Kalaheo Landfill | 34 | 0.1 | 0.1 | 34 | 0.8 | 0.3 | 0 | 0 | 0.6 | 82 | 0.3 | 83 |
| CCH Kapaa Landfill | 39 | 0.2 | 0.1 | 52 | 1.3 | 0.5 | 13 | 25 | 1.2 | 87 | 0.4 | 88 |
| CCH Waste Transfer | 3 | 0.0 | 0.0 | 27 | 0.4 | 0.1 | 24 | 89 | 0.3 | 92 | 0.3 | 95 |
| HI DOT Highways MS4 | 5 | 0.0 | 0.0 | 5 | 0.1 | 0.0 | 0 | 0 | 0.1 | 76 | 0.0 | 76 |
| Ameron Quarry | 91 | 0.3 | 0.1 | 91 | 1.2 | 0.4 | 0 | 0 | 1.5 | 82 | 0.3 | 75 |
| Industrial Park | 31 | 0.1 | 0.0 | 31 | 0.4 | 0.1 | 0 | 0 | 0.4 | 82 | 0.1 | 83 |
| LA to other source areas | 59 | 0.5 | 0.2 | 59 | 1.4 | 0.5 | 0 | 0 | 1.0 | 69 | 0.3 | 66 |
| **Totals** | **269** | **1.2** | **0.4** | **306** | **6.3** | **1.9** | **37** | ***12*** | **5.1** | ***81*** | **1.5** | **79** |

| | TMDLs | | | Existing | | | Reductions Required | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wet Season 10% Runoff** | **TSS** | **TN** | **TP** | **TSS** | **TN** | **TP** | **TSS** | | **TN** | | **TP** | |
| **WLAs** | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kgd) | (%) |
| CCH MS4 | 22 | 0.1 | 0.0 | 113 | 0.2 | 0.2 | 91 | 80 | 0.1 | 61 | 0.0 | 33 |
| CCH Kalaheo Landfill | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| CCH Kapaa Landfill | 16 | 0.2 | 0.0 | 902 | 1.2 | 0.3 | 886 | 98 | 1.1 | 87 | 0.3 | 90 |
| CCH Waste Transfer | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| HIDOT Highways MS4 | 17 | 0.2 | 0.1 | 23 | 0.2 | 0.2 | 6 | 27 | 0.1 | 28 | 0.1 | 60 |
| Ameron Quarry | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Industrial Park | 63 | 0.2 | 0.0 | 89 | 0.6 | 0.1 | 26 | 29 | 0.3 | 59 | 0.1 | 65 |
| LA to Nonpoint sources | 119 | 0.3 | 0.1 | 2252 | 1.2 | 0.9 | 2134 | 95 | 0.9 | 74 | 0.6 | 92 |
| **Totals** | **237** | **1.0** | **0.3** | **3379** | **3.4** | **1.7** | **3142** | ***93*** | **2.5** | ***72*** | **1.5** | ***85*** |

| | TMDLs | | | Existing | | | Reductions Required | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wet Season 2% Runoff** | **TSS** | **TN** | **TP** | **TSS** | **TN** | **TP** | **TSS** | | **TN** | | **TP** | |
| **WLAs** | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kg) | (%) |
| CCH MS4 | 258 | 1.3 | 0.4 | 1926 | 3.2 | 2.1 | 1668 | 87 | 2.0 | 61 | 1.7 | 83 |
| CCH Kalaheo Landfill | 136 | 1.4 | 0.2 | 3154 | 4.6 | 1.3 | 3018 | 96 | 3.3 | 71 | 1.1 | 84 |
| CCH Kapaa Landfill | 800 | 7.1 | 1.3 | 22726 | 30.9 | 8.2 | 21926 | 96 | 23.8 | 77 | 6.9 | 84 |
| CCH Waste Transfer | 42 | 1.3 | 0.3 | 806 | 4.8 | 1.3 | 765 | 95 | 3.4 | 72 | 1.1 | 80 |
| HIDOT Highways MS4 | 212 | 2.2 | 1.1 | 268 | 2.7 | 2.7 | 56 | 21 | 0.5 | 17 | 1.6 | 59 |
| Ameron Quarry | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Industrial Park | 530 | 3.5 | 0.4 | 1239 | 7.8 | 1.6 | 710 | 57 | 4.3 | 55 | 1.2 | 75 |
| LA to Nonpoint sources | 6516 | 15.6 | 3.8 | 41164 | 27.3 | 18.2 | 34648 | 84 | 11.7 | 43 | 14.4 | 79 |
| **Totals** | **8494** | **323** | **7.4** | **71284** | **81.2** | **35.4** | **62790** | ***88*** | **48.9** | ***60*** | **28.0** | **79** |

*TMDL allocations in kgd (kilograms per day) are obtained by dividing wet season kg by 181 days.
Loads and Load Reductions rounded to the nearest 0.1 kg, thus (a) **Totals** may be different than the sum of their parts and (b) **TMDLs, Existing Loads** and **Reductions Required** may actually be greater than 0.
Acronyms – see previous dry season table

Part F.3.b.(4) *Total Maximum Daily Loads (TMDLs) for Total Suspended Solids, Nitrogen and Phosphorus in Kaneohe Stream, Kaneohe, Hawaii* Report (dated September 2009), Table 5.10. – Consolidated Dry Season TMDL Allocations to Major Sources and Table 5.11. – Consolidated Wet Season TMDL Allocations to Major Sources (Pages 5-11 and 5-12) at http://hawaii.gov/health/about/admin/health/environmental/env-planning/env-planning/pdf/KaneoheTMDLFinalWeb.pdf.

***Table 5.10.*** Consolidated Dry Season TMDL Allocations to Major Sources

| Dry Season Baseflow | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (kgd) | (%) | (kgd) | (%) | (kgd) | (%) |
| LA to Hawaii DOT | 31 | 0.38 | 0.052 | 31 | 0.62 | 0.052 | 0 | 0 | 0.24 | 38 | 0 | 0 |
| LA to Hawaii DOD | 1.1 | 0.02 | 0.003 | 1.1 | 0.04 | 0.003 | 0 | 0 | 0.02 | 50 | 0 | 0 |
| LA to Hawaii DOE | 1.3 | 0.06 | 0.003 | 1.3 | 0.06 | 0.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to Hawaii DOH | 1.9 | 0.09 | 0.005 | 1.9 | 0.09 | 0.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to CCH ENV | 253 | 5.02 | 0.474 | 253 | 5.37 | 0.474 | 0 | 0 | 0.35 | 7 | 0 | 0 |
| LA to UH WCC | 1.5 | 0.07 | 0.004 | 1.5 | 0.08 | 0.004 | 0 | 0 | 0.00 | 5 | 0 | 0 |
| LA to Other NPS | 354 | 5.67 | 0.918 | 354 | 9.31 | 0.918 | 0 | 0 | 3.65 | 39 | 0 | 0 |
| Totals: | 643.7 | 11.31 | 1.458 | 644 | 15.58 | 1.458 | 0 | 0 | 4.26 | 27 | 0 | 0 |

| Dry Season 10% Runoff | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kg) | (%) |
| WLA to Hawaii DOT | 65 | 1.07 | 0.33 | 65 | 1.11 | 0.36 | 0 | 0 | 0.04 | 4 | 0.04 | 10 |
| WLA to Hawaii DOD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to Hawaii DOE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to Hawaii DOH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to CCH ENV | 135 | 2.00 | 0.60 | 135 | 2.16 | 0.73 | 0 | 0 | 0.16 | 7 | 0.13 | 18 |
| WLA to UH WCC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to NPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals: | 199 | 3.07 | 0.93 | 199 | 3.28 | 1.09 | 0 | 0 | 0.21 | 6 | 0.17 | 15 |

| Dry Season 2% Runoff | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS | TN | TP | TSS | TN | TP | TSS | | TN | | TP | |
| | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (kg) | (%) | (kg) | (%) | (kg) | (%) |
| WLA to Hawaii DOT | 784 | 8.06 | 1.64 | 784 | 14.6 | 4.56 | 0 | 0 | 6.56 | 45 | 2.92 | 64 |
| WLA to Hawaii DOD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to Hawaii DOE | 0.93 | 0.02 | 0.003 | 0.93 | 0.023 | 0.006 | 0 | 0 | 0 | 31 | 0.002 | 43 |
| WLA to Hawaii DOH | 1.42 | 0.02 | 0.003 | 1.42 | 0.036 | 0.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to CCH ENV | 2,733 | 19.4 | 4.23 | 2733 | 33.7 | 10 | 0 | 0 | 14.3 | 42 | 6.11 | 59 |
| WLA to UH WCC | 1.15 | 0.02 | 0 | 1.15 | 0.029 | 0.007 | 0 | 0 | 0.01 | 45 | 0.005 | 68 |
| LA to NPS | 536 | 8.14 | 1.15 | 536 | 16.1 | 3.22 | 0 | 0 | 7.98 | 50 | 2.07 | 64 |
| Totals: | 4,056 | 35.7 | 7.03 | 4,056 | 64.6 | 18.1 | 0 | 0 | 28.9 | 45 | 11.1 | 61 |

*Table 5.11.* Consolidated Wet Season TMDL Allocations to Major Sources

| Wet Season Baseflow | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS (kgd) | TN (kgd) | TP (kgd) | TSS (kgd) | TN (kgd) | TP (kgd) | TSS (kgd) | TSS (%) | TN (kgd) | TN (%) | TP (kgd) | TP (%) |
| LA to Hawaii DOT | 34 | 0.51 | 0.057 | 34 | 0.68 | 0.057 | 0 | 0 | 0.17 | 25 | 0 | 0 |
| LA to Hawaii DOD | 1 | 0.035 | 0.004 | 1 | 0.054 | 0.004 | 0 | 0 | 0.02 | 35 | 0 | 0 |
| LA to Hawaii DOE | 2 | 0.076 | 0.004 | 2 | 0.076 | 0.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to Hawaii DOH | 2 | 0.11 | 0.006 | 2 | 0.11 | 0.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to CCH ENV | 297 | 6.07 | 0.557 | 297 | 6.31 | 0.557 | 0 | 0 | 0.24 | 4 | 0 | 0 |
| LA to UH WCC | 2 | 0.090 | 0.004 | 2 | 0.090 | 0.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to Other NPS | 392 | 7.70 | 1.017 | 392 | 10.33 | 1.02 | 0 | 0 | 2.63 | 25 | 0 | 0 |
| Totals: | 729 | 14.59 | 1.648 | 729 | 17.65 | 1.648 | 0 | 0 | 3.07 | 17 | 0 | 0 |

| Wet Season 10% Runoff | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS (kg) | TN (kg) | TP (kg) | TSS (kg) | TN (kg) | TP (kg) | TSS (kg) | TSS (%) | TN (kg) | TN (%) | TP (kg) | TP (%) |
| WLA to Hawaii DOT | 273 | 4.21 | 1.25 | 273 | 4.94 | 1.57 | 0 | 0 | 0.73 | 15 | 0.32 | 20 |
| WLA to Hawaii DOD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to Hawaii DOE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to Hawaii DOH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to CCH ENV | 594 | 6.03 | 1.89 | 594 | 8.42 | 2.88 | 0 | 0 | 2.39 | 28 | 0.99 | 34 |
| WLA to UH WCC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA to NPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals: | 868 | 10.2 | 3.14 | 868 | 13.4 | 4.44 | 0 | 0 | 3.12 | 23 | 1.30 | 29 |

| Wet Season 2% Runoff | Allocations | | | Existing Loads | | | Reductions Needed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TSS (kg) | TN (kg) | TP (kg) | TSS (kg) | TN (kg) | TP (kg) | TSS (kg) | TSS (%) | TN (kg) | TN (%) | TP (kg) | TP (%) |
| WLA to Hawaii DOT | 1,834 | 14.5 | 4.21 | 1,834 | 34.5 | 10.7 | 0 | 0 | 20.0 | 58 | 6.50 | 61 |
| WLA to Hawaii DOD | 11.5 | 0.16 | 0.03 | 11.5 | 0.43 | 0.07 | 0 | 0 | 0.27 | 63 | 0.05 | 63 |
| WLA to Hawaii DOE | 30.0 | 0.51 | 0.11 | 30.0 | 0.75 | 0.19 | 0 | 0 | 0.24 | 32 | 0.07 | 39 |
| WLA to Hawaii DOH | 41.0 | 0.47 | 0.10 | 41.0 | 1.02 | 0.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| WLA to CCH ENV | 11,672 | 88.8 | 22.1 | 11,672 | 148 | 41.0 | 0 | 0 | 59.7 | 40 | 18.9 | 46 |
| WLA to UH WCC | 33.1 | 0.38 | 0.08 | 33.1 | 0.83 | 0.21 | 0 | 0 | 0.45 | 54 | 0.12 | 60 |
| LA to NPS | 5,889 | 68.6 | 13.6 | 5,889 | 184 | 36.6 | 0 | 0 | 115 | 63 | 23.1 | 63 |
| Totals: | 19,511 | 173 | 40.2 | 19,511 | 369 | 89.0 | 0 | 0 | 196 | 53 | 48.8 | 55 |

Part F.3.b.(5) *Total Maximum Daily Loads (TMDLs) for the North and South Forks of Kaukonahua Stream, Oahu, Hawaii* Report (dated September 2009), Table 4.4 – Allocations by Land Use Category – Flow Intervals (Page 4-4) and Table 4.5 – Load Allocations by Land Use Category – Major Storm Event (Page 4-5) at http://hawaii.gov/health/environmental/env-planning/env-planning/pdf/UKSTMDLFinalWeb.pdf (14.9 MB).

**Table 4-4: Allocations by Land Use Category - Flow Intervals**

**Turbidity (NTU-tons/d)**

| | Wet Season | | | Dry Season | | |
|---|---|---|---|---|---|---|
| Flow Duration Curve Interval | High | Elevated | Stable | High | Elevated | Stable |
| **South Fork** | | | | | | |
| TMDL | 8.61 | 1.23 | 0.0704 | 2.24 | 0.744 | 0.0196 |
| Waste Load Allocation | 0 | 0 | 0 | 0 | 0 | 0 |
| Load Allocation | 8.61 | 1.23 | 0.0704 | 2.24 | 0.744 | 0.0196 |
| Conservation | 8.61 | 1.23 | 0.0704 | 2.24 | 0.744 | 0.0196 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Fork** | | | | | | |
| TMDL | 13.1 | 2.29 | 0.094 | 2.53 | 0.840 | 0.0291 |
| Waste Load Allocation | 0.612 | 0.108 | 0.0031 | 0.119 | 0.039 | 0.0010 |
| Navy MS4 | 0.219 | 0.039 | 0.0011 | 0.043 | 0.014 | 0.0003 |
| CCH MS4 | 0.393 | 0.069 | 0.0020 | 0.076 | 0.025 | 0.0006 |
| Load Allocation | 12.47 | 2.18 | 0.091 | 2.41 | 0.800 | 0.0281 |
| Agricultural | 0.370 | 0.065 | 0.004 | 0.072 | 0.024 | 0.0012 |
| Conservation | 12.1 | 2.12 | 0.087 | 2.34 | 0.776 | 0.0269 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |

**Total Nitrogen (lb/d)**

| | Wet Season | | | Dry Season | | |
|---|---|---|---|---|---|---|
| Flow Duration Curve Interval | High | Elevated | Stable | High | Elevated | Stable |
| **South Fork** | | | | | | |
| TMDL | 592 | 115 | 7.27 | 117 | 30.7 | 4.97 |
| Waste Load Allocation | 0 | 0 | 0 | 0 | 0 | 0 |
| Load Allocation | 592 | 115 | 7.27 | 117 | 30.7 | 4.97 |
| Conservation | 592 | 115 | 7.27 | 117 | 30.7 | 4.97 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Fork** | | | | | | |
| TMDL (Total) | 1,063 | 135 | 10.6 | | | |
| Waste Load Allocation | 543 | 68.8 | 2.79 | | | |
| Navy MS4 | 195 | 24.6 | 1.00 | | | |
| CCH MS4 | 349 | 44.1 | 1.79 | | | |
| Load Allocation | 520 | 65.8 | 7.77 | | | |
| Agricultural | 122 | 15.4 | 3.69 | | | |
| Conservation | 398 | 50.3 | 4.08 | | | |
| Margin of Safety | 0 | 0 | 0 | | | |

Notes:
TMDL = LA + WLA + MOS
The explicit MOS is zero, the TMDL includes an implicit MOS

Table 4-5: Load Allocations By Land Use Category - Major Storm Events

**Turbidity (NTU-tons/d)**

| | Wet Season | | | Dry Season | | |
|---|---|---|---|---|---|---|
| Storm Recurrence | 1-Year Storm | 2-Year Storm | Peak | 1-Year Storm | 2-Year Storm | Peak |
| **South Fork** | | | | | | |
| TMDL | 90.8 | 134 | 813 | 57.3 | 86.2 | 570 |
| Waste Load Allocation | 0 | 0 | 0 | 0 | 0 | 0 |
| Load Allocation | 90.8 | 134 | 813 | 57.3 | 86.2 | 570 |
| Conservation | 90.8 | 134 | 813 | 57.3 | 86.2 | 570 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Fork** | | | | | | |
| TMDL (Total) | 48.5 | 71.7 | 435 | 30.6 | 46.1 | 305 |
| Waste Load Allocation | 2.28 | 3.36 | 20.4 | 1.44 | 2.16 | 14.3 |
| Navy MS4 | 0.816 | 1.20 | 7.31 | 0.515 | 0.774 | 5.12 |
| CCH MS4 | 1.46 | 2.16 | 13.1 | 0.922 | 1.39 | 9.17 |
| Load Allocation | 46.2 | 68.3 | 414 | 29.2 | 43.9 | 290 |
| Agricultural | 1.38 | 2.03 | 12.321 | 0.868 | 1.31 | 8.64 |
| Conservation | 44.9 | 66.3 | 402 | 28.3 | 42.6 | 282 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |

**Total Nitrogen (lb/d)**

| | Wet Season | | | Dry Season | | |
|---|---|---|---|---|---|---|
| Storm Recurrence | 1-Year Storm | 2-Year Storm | Peak | 1-Year Storm | 2-Year Storm | Peak |
| **South Fork** | | | | | | |
| TMDL | 5,818 | 8,591 | 52,108 | 3,673 | 5,525 | 36,526 |
| Waste Load Allocation | 0 | 0 | 0 | 0 | 0 | 0 |
| Load Allocation | 5,818 | 8,590 | 52,108 | 3,673 | 5,524 | 36,526 |
| Conservation | 5,818 | 8,590 | 52,108 | 3,673 | 5,524 | 36,526 |
| Margin of Safety | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Fork** | | | | | | |
| TMDL (Total) | 5,831 | 8,613 | 52,238 | | | |
| Waste Load Allocation | 2,980 | 4,403 | 26,702 | | | |
| Navy MS4 | 1,068 | 1,578 | 9,568 | | | |
| CCH MS4 | 1,912 | 2,825 | 17,134 | | | |
| Load Allocation | 2,850 | 4,210 | 25,536 | | | |
| Agricultural | 669 | 988 | 5,991 | | | |
| Conservation | 2,182 | 3,223 | 19,546 | | | |
| Margin of Safety | 0 | 0 | 0 | | | |

Notes: TMDL = LA + WLA + MOS.
The explicit MOS is zero. the TMDL includes an implicit MOS.

Part F.3.b.(6) In accordance with 40 CFR §122.44(d)(1)(vii)(B), where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL. However, in the absence of WLAs being assigned to the Permittee for the TMDLs approved for Waimanalo Stream, the Permittee shall comply with the water quality standards (WQS) as specified in HAR, Chapter 11-54-5.2(b) – Specific criteria for streams, and submit a compliance schedule with a final compliance deadline within one (1) year of the effective date of this permit. The compliance schedule shall provide for the implementation of the BMPs, pre and post activity monitoring to evaluate its performance, and time to make adjustments necessary to demonstrate compliance with the water quality standards at the earliest possible time. If the schedule extends beyond a year, interim dates and milestones shall be included in the schedule with the time between interim dates not to exceed one (1) year. The permittee shall, at a minimum, monitor for compliance with the WQS at the monitoring locations as identified in Figures 1 and 2, below. DOH may consider modification of the permit, if more appropriate monitoring locations are identified by the permittee in the future.

HAR, Chapter 11-54-5.2(b) – Specific criteria for streams

(b) Specific criteria for streams. Water column criteria for streams shall be as provided in the following table:

| Parameter | Geometric mean not to exceed the given value | Not to exceed the given value more than ten per cent of the time | Not to Exceed the given value more than two per cent of the time |
|---|---|---|---|
| Total Nitrogen (ug N/L) | 250.0*<br>180.0** | 520.0*<br>380.0** | 800.0*<br>600.0** |
| Nitrate + Nitrite Nitrogen (ug $[NO_3+NO_2]$-N/L) | 70.0*<br>30.0** | 180.0*<br>90.0** | 300.0*<br>170.0** |
| Total Phosphorus (ug P/L) | 50.0*<br>30.0** | 100.0*<br>60.0** | 150.0*<br>80.0** |
| Total Suspended Solids (mg/L) | 20.0*<br>10.0** | 50.0*<br>30.0** | 80.0*<br>55.0** |
| Turbidity (N.T.U.) | 5.0*<br>2.0** | 15.0*<br>5.5** | 25.0*<br>10.0** |

* Wet season - November 1 through April 30.
** Dry season - May 1 through October 31.

L = liter
N.T.U. = Nephelometric Turbidity Units. A comparison of the intensity of light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension under the same conditions. The higher the intensity of scattered light, the higher the turbidity.
ug = microgram or 0.000001 grams
pH Units - shall not deviate more than 0.5 units from ambient conditions and shall not be lower than 5.5 nor higher than 8.0
Dissolved Oxygen - Not less than eighty per cent saturation, determined as a function of ambient water temperature.
Temperature - Shall not vary more than one degree Celsius from ambient conditions.
Specific Conductance - Not more than three hundred micromhos/centimeter.
(2) Bottom criteria for streams:

(A) Episodic deposits of flood-borne soil sediment shall not occur in quantities exceeding an equivalent thickness of five millimeters (0.20 inch) over hard bottoms twenty-four hours after a heavy rainstorm.

(B) Episodic deposits of flood-borne soil sediment shall not occur in quantities exceeding an equivalent thickness of ten millimeters (0.40 inch) over soft bottoms twenty-four hours after a heavy rainstorm.

(C) In soft bottom material in pool sections of streams, oxidation-reduction potential (EH) in the top ten centimeters (four inches) shall not be less than +100 millivolts.

(D) In soft bottom material in pool sections of streams, no more than fifty per cent of the grain size distribution of sediment shall be smaller than 0.125 millimeter (0.005 inch) in diameter.

(E) The director shall prescribe the appropriate parameters, measures, and criteria for monitoring stream bottom biological communities including their habitat, which may be affected by proposed actions. Permanent benchmark stations may be required where necessary for monitoring purposes. The water quality criteria for this subsection shall be deemed to be met if time series surveys of benchmark stations indicate no relative changes in the relevant biological communities, as noted by biological community indicators or by indicator organisms which may be applicable to the specific site.

Figure 1. - Waimanalo TMDL Monitoring Point No. 1

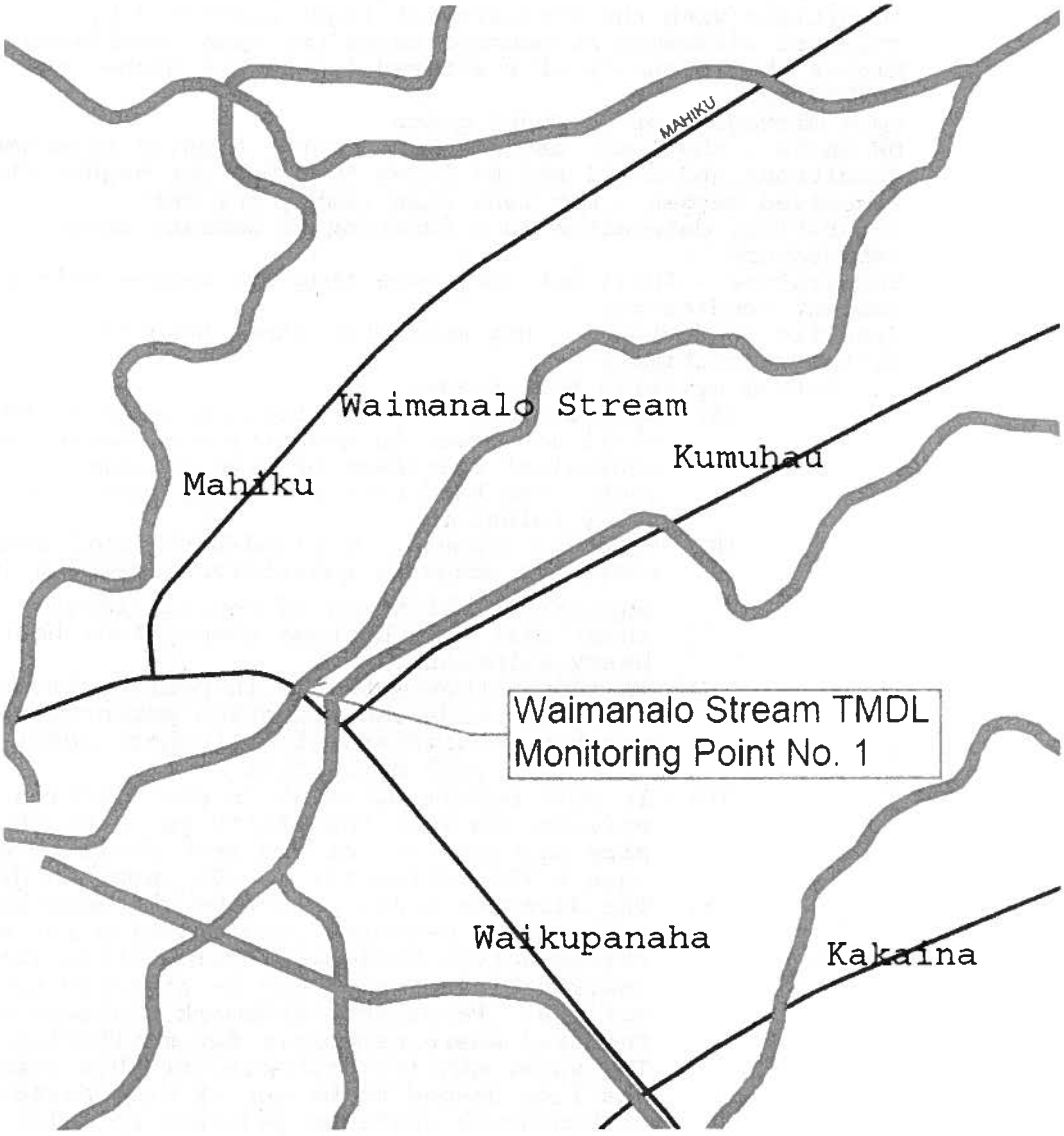
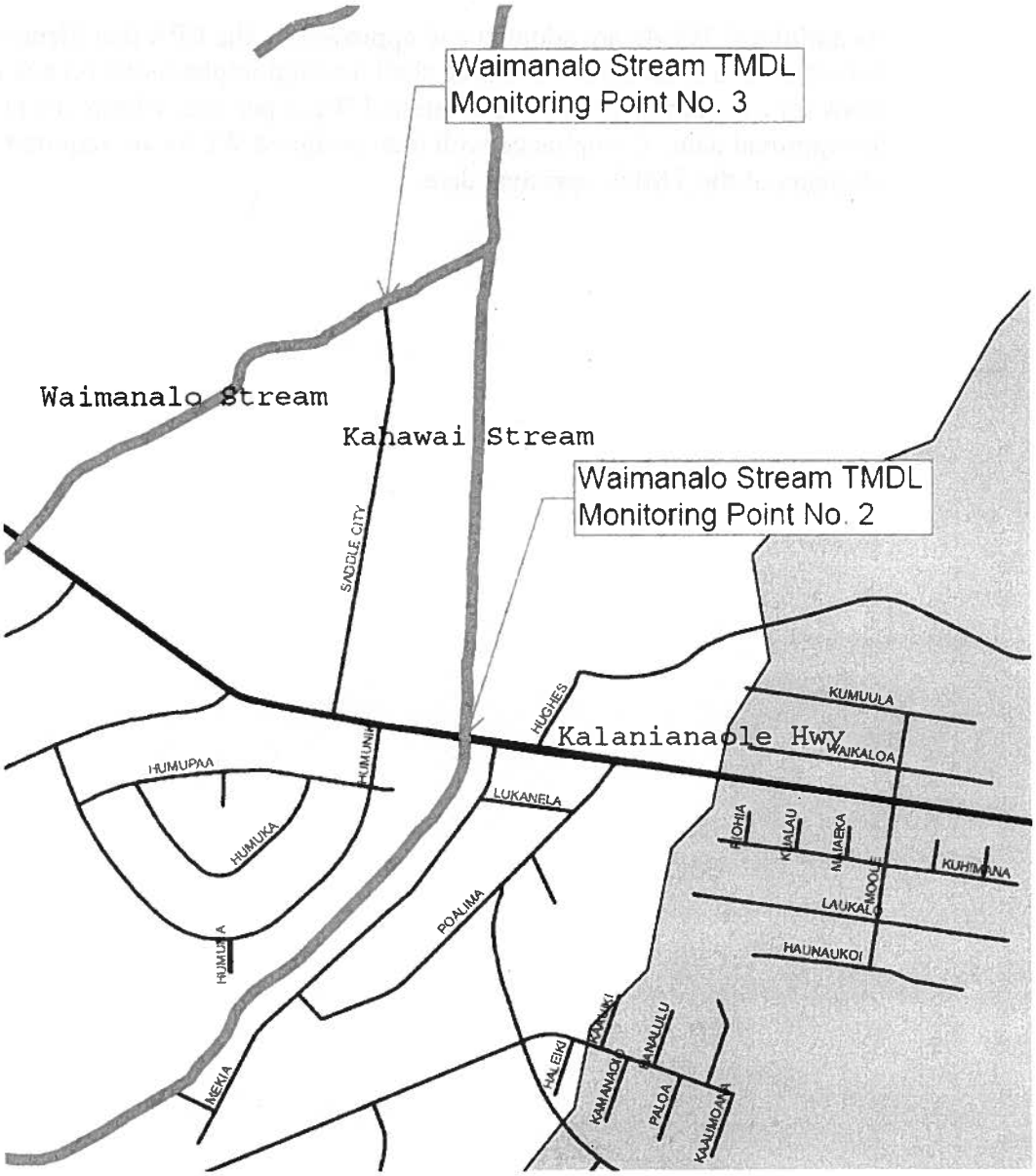


Figure 2. - Waimanalo TMDL Monitoring Point Nos. 2 & 3



Part F.4. Other WLAs

As additional WLAs are adopted and approved by the EPA that identify the Permittee as a source, the Permittee shall develop implementation and monitoring plans for a minimum of one (1) additional WLA per year within one (1) year of the approval date. Compliance with their assigned WLAs are required within two (2) years of the TMDL approval date.

## Part G. REPORTING REQUIREMENTS

All submittals to DOH shall be in a format consistent with first satisfying the requirements of this permit.

Part G.1. Annual Report

PartG.1.a. The Permittee shall submit the Annual Report by October 31st of each year in pdf format (minimum 300 dpi) on CD/DVD. The Annual Report shall cover the past fiscal year. The Annual Report for the fiscal year prior to the expiration date of the permit shall serve as the permit's renewal application. Submittal of the renewal application shall include a $1,000 filing fee.

PartG.1.b. The Permittee shall revise its SWMP to include a description of reporting procedures and activities, including schedules and proposed content of Annual Reports such that, at a minimum, the following is reported for each storm water program component in each Annual Report:

Part G.1.b.(1) *Requirements*: Describe what the Permittee was required to do (describe status of compliance with conditions of this permit and other commitments set forth in the SWMP).

Part G.1.b.(2) *Past Year Activities*: Describe activities over the reporting period in comparison to the requirements, including, where applicable, progress accomplished toward meeting specific measurable goals, standards and milestones or other specific performance requirements. When requirements were not fully met, include a detailed explanation as to why the Permittee did not meet its commitments for the reporting period. Also describe an assessment of the SWMP, including progress towards implementing each of the SWMP program components.

Part G.1.b.(3) *Future Activities*: Describe planned activities, including, where applicable, specific activities to be undertaken during the next reporting period toward accomplishing specific measurable goals, standards and milestones or other specific performance requirements.

Part G.1.b.(4) *Resources*: Report on the status of the Permittee's resource base for implementing this NPDES permit during the applicable reporting period and an estimate of the resources over and above those required in the current reporting period that will be required in the next reporting period.

PartG.1.c. *Modifications.* In each Annual Report, the Permittee shall describe any modifications made to the SWMP and implementation schedule during the past year, including justifications. The Permittee shall also describe major modifications made to the Permittee's MS4, including, but not limited to, addition and removal of outfalls, drainage lines, and City facilities.

PartG.1.d. *Program Effectiveness Reporting.* Within one (1) year of the effective date of the permit, the Permittee shall submit to DOH a written strategy for determining effectiveness of its SWMP. The strategy shall include water quality monitoring efforts as well as program implementation information and other indicators. The Permittee shall include an assessment of program effectiveness and identification of water quality improvements or degradation beginning with the 2nd Annual Report.

Part G.2. Annual Monitoring Report

Part G.2.a. The Permittee shall submit the Annual Monitoring Report by October 31st of each year in pdf format (minimum 300 dpi) on CD/DVD. The Annual Monitoring Report shall cover the past fiscal year.

Part G.2.b. The monitoring report shall at a minimum, include the following items:

Part G.2.b.(1) Discussion on the activities/work implemented to meet each objective, as outlined in Part F.1.a., including any additional objectives indentified by the Permittee, and the results [e.g. assessment of the water quality issues in each watershed resulting from storm water discharges, refer to Part F.1.a.(7)] and conclusions.

Part G.2.b.(2) Written narrative of the past fiscal year's activities, including those coordinated with other agencies, objectives of activities, results and conclusions.

Part G.2.b.(3) Data gathered on levels of pollutants in non-storm water discharges to the City MS4; and

Part G.2.b.(4) Using rainfall data collected by the Permittee and other agencies, the Permittee shall relate rainfall events, measured pollutant loads, and discharge volumes from the watershed and other watersheds that may be identified from time to time by the Director or Permittee.

Part G.2.b.(5) Lists by highest priority first of each type of municipal industrial facility covered under this permit, as required in Part F.2., and the date when monitoring occurred. The monitoring event indicated on this list shall be of a representative storm event, where results were available for all required parameters following the QA/QC measures as described in your Annual Monitoring Plan.

Part G.2.b.(6) DMRs for Municipal Industrial Facilities shall be included in the Annual Monitoring Report and be submitted via NetDMR once established by the DOH. NetDMR is a Web-based tool that allows NPDES permittees to electronically sign and submit their DMRs to EPA's Integrated Compliance Information System (ICIS-NPDES) via the Environmental Information Exchange Network. A DMR must be submitted for the facility which is scheduled to be monitored even if sampling was not conducted. An explanation as to why sampling was not conducted shall be explained with the submittal.

Part G.3. Memorandum of Understanding (MOU) and Memorandum of Agreement (MOA) - Roles and Responsibilities of the City

Part G.3.a. The Permittee shall continue to maintain and comply with the "Memorandum of Understanding Between the Department of Transportation Highways Division, State of Hawaii, and the Department of Environmental Services and the Department of Facility Maintenance, City and County of Honolulu," signed by the Department of Environmental Services on December 19, 2001; by the Department of Facility Maintenance on December 27, 2001; and the State Department of Transportation, Highways Division on February 1, 2002. Amendments to the MOU, if any, shall be summarized in the Annual Report.

Part G.3.b. The Permittee shall continue to maintain and comply with the "Memorandum of Understanding between the Department of Health, Environmental Management Division, State of Hawaii, and Department of Public Works, City and County of Honolulu," signed by the Department of Public Works on September 28, 1995, and the Department of Health on October 11, 1995. The Permittee shall coordinate MOU revisions where joint cooperation is required, as identified in this permit; and to reflect the reorganization of the City's departments, if applicable. Amendments to the MOU, shall be summarized in the Annual Report.

Part G.3.c. The Permittee shall continue to maintain and comply with the "Memorandum of Agreement Responsibilities under NPDES Permit HI S000002 City and County of Honolulu's Municipal Separate Storm Sewer System and Certain Industrial Facilities" between the Department of Environmental Services, Department of Planning and Permitting, Department of Facility Maintenance, Department of Design and Construction, Department of Parks and Recreation, Department of Enterprise Services, Department of Transportation Services, Honolulu Fire Department, and Honolulu Police Department signed by the Managing Director of the City on October 9, 2007. Any amendments to the MOA, if any, shall be summarized in the Annual Report.

S000002.FNL.11